W.P.

COASTAL ZONE MANAGEMENT PROGRAM

CITY OF BUFFALO

MAYOR STANLEY M. MAKOWSKI

Department of Community Development
Richard L. Miller, Commissioner
Richard S. Danforth, Deputy Commissioner

May, 1977

COASTAL ZONE MANAGEMENT PROGRAM

CITY OF BUFFALO

TASK 7.3

IDENTIFICATION OF THE COASTAL ZONE BOUNDARY

AND GEOGRAPHIC AREAS OF PARTICULAR CONCERN

WITHIN THE CITY OF BUFFALO

APRIL, 1977

INTRODUCTION:

As settlers of the newly formed American republic began to move westward, the settlement of Buffalo grew in the path of this migration. The city flourished as a transfer point. It was used by people going West and products coming East. Buffalo grew larger than many old colonial cities on the East Coast. It later was to be surpassed in size by new population centers in the Midwest, the South and the West as the nation grew with the help of the Port of Buffalo. Changes in transportation methods and routes eventually reduced the importance of the transfer role of the Port of Buffalo.

The City of Buffalo was incorporated in 1832. It is the second largest city in New York State, encompassing a land area of 42 square miles. The City is located in Erie County in Western New York State on the eastern shore of Lake Erie.

PROFILE:

The following information is included as a profile of existing demographic conditions of the City of Buffalo.

- Population has been declining since 1950, with a 7% decline between 1973 and 1975. There was a significant decline in the under 18 age bracket. There was an increase in single person households (11%) which reflects an increase in the number of young and elderly persons living alone. The exact percentage of each is not known. Projections of population by the Regional Planning Board show a 12% decline by the year 2000.
- The number of total housing units in the City of Buffalo has significantly decreased since 1970. Intensified demolition activity has removed thousands of deteriorated housing units from the city's housing stock which stood at 151,000 units in 1975. The majority removed were 2-4 unit structures, as they were no longer owner occupied. The concentration of elderly households have moved steadily towards the upper eastern portion of the City from the western concentration prevalent in the early 1970'a. Home ownership has increased from 44% in 1970 to 50% in 1975. 27% of the city's households are retired, 64% of the city's 138,000 households are occupied by 1-2 person families and 14% of the households are occupied by families with five or more persons.
- A good indication of the economic state of the city is

its employment status. The largest occupational group in the city (37%) was service, operatives and unskilled. 29% of the work force is clerical and sales, skilled, semi-skilled, and foremen. During 1975, Buffalo experienced an unemployment rate ranging from 13.2% to 16.1%. This was higher than 1974. Another economic indicator is household income. The average household income increased 7% over a two year period to $12,157 in 1975. The city's sales tax revenue increased 130% from $7.1 million to $16.5 million from 1969-1972.

- The city's crime rates had somewhat stabilized or even dropped slightly in the past few years, but are on the rise, for the past two years. The total "serious crime" rate has increased, as has crimes against persons - robbery.
- 32% of all households in the city were without automobiles in 1970, but those households without automobiles are served by Niagara Frontier Transit Metro System.

The City of Buffalo is a major industrial and transportation center. Major industrial areas are located near the Buffalo Harbor, along Lake Erie and Northward along the Niagara River to Tonawanda. Buffalo has major port facilities that are connected to the New York State Barge Canal by a Federally maintained navigation channel and lock in the Niagara River. Buffalo is a major rail transportation center and lies astride the New York State Thruway, a highway linking midwestern and eastern markets.

The economy of Buffalo and the metropolitan area is marked by a

predominance of manufacturing, including products such as metal and auto parts, electrical equipment and supplies, chemical products, clothing and various types of commercial and industrial machinery. Manufacturing from 1970 to 1975 has decreased in importance while the categories of trade, government and services have become more important.

The median family income in the city for the year 1969 was $8,804. According to the U.S. Census, compared to median family incomes of $10,430 and $10,617 for the Buffalo SMSA and New York State respectively. In 1969, 14.2% of the city's families had incomes in excess of $15,000, while 11.2% of Buffalo families had incomes below the federal poverty level compared with 10.7% for the nation as a whole.

LAND USE

The Coastal Zone of the City of Buffalo is composed of two distinct land areas.

- the area north of the central business district along the Niagara River to the northern city line
- the area south of the central business district to the southern city line.

A significant natural feature in the northern sector of the coastal zone is a bluff that starts near Porter Avenue and follows the shore of the Niagara River northward to the city line. The entire Riverfront has very limited accessibility to the public for recreational pursuits. The multilane New York State Thruway was built in close proximity to the river bank, thus restricting both available land and access. For most part, the thruway is

constructed on the former right-of-way of the Erie Canal. Much of its length, it is elevated above the level of the surrounding land, either on structures or on fill.

The thruway is a barrier to cross-movement to the river, since it is pierced only occasionally by city streets, or in two instances, pedestrian over passes. In two areas, pedestrians illegally cross the freeway by jumping over fences: at Riverside Park, and also at the foot of Massachusetts Street. The public utilizes three existing city street connections to the Riverfront - Austin Street, Hertel Avenue and the foot of Hamilton. The traffic noise penetrates the surrounding neighborhoods day and night. Many excellent views of the waterfront area or of Canada can be obtained from the thruway. However, the task of driving and the high speed limits preclude the full appreciation of the natural beauty within the corridor.

A principal arterial, Niagara Street, parallels the thruway from the northern boundary of the city, to the Central Business District. The character of the neighborhood through which it travels is basically industrial and commercial. Many city streets which cross Niagara Street and ended at the River have been blocked off by the New York State Thruway. Other local streets cannot reach the water front due to topographic restraints such as the steep bluffs south of Ferry Street.

Industrial and commercial uses along the riverfront do not, in most instances, need to be adjacent to the River for their operations. Most front upon Niagara Street and face away from the river or canal. Thus the view from the river is of a visually

unappealing sight of the back doors of buildings and properties. Most of the industry is concentrated from the area south of the Scajaquada Expressway to the Peace Bridge. The use is light manufacturing and utilize trucks for transportation.

Swift currents and shallow waters preclude the use of much of the Niagara River for commercial craft. They must travel through the Black Rock Canal or river channels. The Black Rock locks provide access between the river and the canal. Commercial water-borne transportation on the canal appears to be declining while recreational uses are increasing.

The first 16,000 feet of channel of the river, relatively narrow, is being formed on the east by the Black Rock Canal breakwater and Bird and Squaw Island, and on the west by Canada. The river broadens at a point opposite the extension of Austin Street.

In the River, Squaw Island is the site of a new secondary sewer treatment plant. The northend of the island is being used as a site for dumping incinerator ash from the Bird Island Plant. The rest of the land is generally in a natural state.

The Black Rock Canal is immediately adjacent to the western shoreline of Buffalo. It was formed by a breakwater that is roughly parallel to the shoreline and separates it from the Niagara River. The breakwater extends northerly from a point opposite Virginia Street to the southern tip of Bird Island. The canal extends northerly to the Corps of Engineers locks at the northern end of Squaw Island.

There are three major parks, La Salle, Front and Riverside in the northern section of the coastal zone. Although these facilities

and lands are owned and maintained by the City of Buffalo, they are used by people throughout the region. A major new boating facility, the Erie Basin Marina, is located near the Central Business District. Broderick Park, located at the end of Ferry Street, is a very popular fishing spot but has minimal development. At the foot of Ontario Street, a small park is used for launching boats and for fishing, again with minimal facilities and design.

The Buffalo Urban Renewal Area is west of the thruway adjacent to the Central Business District, south of La Salle Park, and north of Marine Drive. Urban Renewal actions that have been carried out in the area pursuant to an approved plan are as follows:

- development of a small boat harbor and marina and related waterfront recreational facilities (Erie Basin Marina)
- development of a school and school facilities (Water Front School)
- development of rental housing units (Shoreline Apartments)
- there is still about 40 acres of vacant land which is designated from commercial and housing use. As yet, there exists no firm commitment of use.

Scajaquada Creek is a relatively small stream originating in the Town of Lancaster, flows west through the Town of Cheektowaga and the City to its outfall in the Upper Black Rock Harbor. Total drainage area is about 24 square miles, 8 miles within the city. A portion has been identified within the coastal zone.

The coastal area south of the Central Business District includes a waterfront district, a shipping district, heavy industrial zones,

two residential areas, a wetland and a park.

The Buffalo harbor consists of an outer harbor, the Buffalo Ship Canal and an inner harbor, the Buffalo River. The outer harbor includes the Niagara Frontier Transportation Authorities Port of Buffalo and small boat harbor. The Port consists of two seaway piers which provide facilities for bulk cargo and can handle 1000 foot freighters. It is serviced by the Penn Central Railroad and is adjacent to the New York State Thruway. The small boat harbor offers facilities for motor boats and sailboats.

The Port of Buffalo maintains a foreign trade zone within the port area which serves as a low cost distribution center. Products may be assembled and stored duty free.

Use of the outer harbor is made possible by the existence of two breakwaters which provide two channel entrances to the harbor:

- the north entrance channel has a depth of 25 feet in soft material and 26 feet in hard material. The northern end of the Outer Harbor has a project depth of 23 feet. The Buffalo River and its entrance channel has a depth of 22 feet in soft material and 23 feet in hard material.
- the south entrance channel has a 30 and 29 foot project depth, with a depth of 28 feet at the southerly end of the outer harbor.
- between the two ends of the breakwater, the outer harbor is generally maintained at a depth of twenty-seven feet.

In addition to hiking and biking, it will be used for jogging, fishing and in the winter, cross country skiing.

DETERMINATION OF COASTAL ZONE BOUNDARY

The Coastal Zone Management Act of 1972 has a requirement that must be met in determining the boundary of a coastal zone.

- the zone should extend inland only as far as necessary "to control shorelands the uses of which have a direct and significant impact on coastal waters."

In determining the boundary for the coastal zone, the Coastal Zone Management Program staff of the City of Buffalo addressed the following problems:

- How large a planning area is adequate to allow the state to consider fully the major problems and the associated systems and units?
- What are the existing and anticipated permissible uses which cause or could cause direct and significant impacts on coastal waters?
- Where are any geographic areas of particular concern?
- transitional or intensely developed areas where reclamation, restoration, public access and other actions are especially needed.
- areas especially suited for intensive use or development
- immediacy of need.

The law, as interpreted by the State of New York identifies as to be included in the Coastal Zone:

- Great Lakes water areas within state jurisdiction - the waters out to the international boundary with Canada.

- Wetlands - areas where vegetation and wild life are dependent upon the periodic inundation of Great Lake waters.

The state has indicated three acceptable approaches for determining the boundary of the coastal zone: biophysical approach, biophysical/administrative approach, or administrative approach. The main criteria for the determination of the coastal zone for the City of Buffalo was that it be broad enough to include all possible geographic and land use features which directly impact the Buffalo waters, but sufficiently narrow to facilitate effective management. Buffalo is an urban area where the shoreline has been extensively modified, natural systems relationships between land and water extremely complex. The strong influence of the waters upon the land was recognized by dependency of use upon water access or visual relationships between land and water.

The coastal zone identified for the City of Buffalo is within the political boundary of the city and follows, for most part, cultural features of the city. (Attachment H)

The designated Coastal Zone boundary of the City of Buffalo has had citizen input and is the recommendation of the Buffalo Coastal Zone Management Program. It has been approved by the Planning Board of the City of Buffalo.

DESCRIPTION:

Starting at the northern city line at Vulcan Street, the Coastal Zone boundary extends south parallel to Niagara Street, 200 feet

from the Niagara Street R.O.W., cross intersection Niagara Street and Tonawanda Street and follow line 200 feet from northern bank of Scajawuada Creek, or 100 feet from the R.O.W. of the Scajaquada Expressway, whichever is greater, continuing to the dam at Howell Street. The line continues 200 feet from the south bank of Scajawuada Creek, or 100 feet from the Scajaquada Expressway, whichever is greater, to Niagara Street. Continues 200 feet from R.O.W. east side of Niagara Street south to Busti Avenue, 200 feet from R.O.W. parallel line northeast side Busti Avenue to Porter Avenue, parallel line 200 feet south east R.O.W. southeast side Porter Avenue, south line parallel 200 feet east from edge of New York State Thruway R.O.W. to Seneca Street. Continues northeast middle of Seneca Street to middle of Pearl Street, south middle line of Pearl Street to New York Thruway, follows mid line New York Thruway to Chicago Street, south mid-line Chicago Street to South Park Avenue, southeast midline South Park Avenue to Louisiana Street, south midline Louisiana Street to Republic Street, southeast midline Republic Street, northeast midline Erie Lackawanna Railroad to South Park Avenue, south-southeast midline South Park Avenue to R & W Railroad, midline R & W Railroad R.O.W. north-northwest to Elk Street, southwest midline Elk Street to Seneca Street, northwest midline Seneca Street to Archer Avenue, northwest midline Archer Street, following continuation line in undeveloped area to Penn Central Railroad, follow Penn Central midline tracks to eastern edge Houghton Park, north on eastern edge to line development, southeast to Buffalo River, 200 feet northern river bank to city line. Follow 200 feet south Buffalo river bank westward to mid-lot line between

Avondale Place and Leavington Place, northwest midline Seneca Street to Poureroy Street, across Mungouar Playground to Bailey Avenue, southeast midline Bailey Avenue to South Park Avenue, south midline South Park Avenue to Hopkins Street, Hopkins Street south to B. R. & P. Railroad R.O.W., southeast along B.R. & P. Railroad R.O.W. to south city boundary of South Park. West city line to international boundary line Lake Erie. (See Attachment H)

Before a coastal zone boundary was determined, an inventory of uses was completed for an area extending beyond the preliminary boundary which had been established for the Coastal Zone. Information was transferred from Sanborn maps to city maps of a 1":800' scale. (See Attachment N)

DETERMINATION OF GEOGRAPHIC AREAS OF CONCERN

Three basic criteria were used for delineating areas of geographic concern:

- areas were identified with significant natural values, among these physical or scenic.
- transitional areas where either restoration or further development is called for; or intensely developed areas where modifications may be necessary.

- areas which are threatened for various reasons were identified. Also, areas with qualities which are already scarce.

After the basic identification had been made, each area was analyzed using the following criteria:

- significant natural values, physical or scenic, cultural historic
- transitional characteristics necessitating restoration or further development
- threats to or scarcity of the area's characteristics
- how close is the area to that point where its character will be completely altered
- how fast is the change in a given use altering the resource base
- what sort of potentially irreversible commitment is being made to one use
- what uses are proposed for the area in existing plans/ studies
- what uses do county, regional, state and national interests propose for the area
- how may continued expansion of economic activities and employment opportunities be achieved without undue damage to or destruction of natural resources and scenic values
- how may the area help to fully realize the tourist and recreation value of the zone
- how strong is public concensus on controversy regarding proposed uses for the area
- high natural productivity on essential habitat for living resources (fish, wildlife, and other trophic levels in the food web)

- substantial recreational value and/or opportunity
- developments and facilities dependent on the utilization of or access to coastal waters
- areas of unique geologic or topographic significance to commerce or industry
- intense competition for shoreline utilization and water uses
- significant hazard if developed due to storms, slides, floods, erosion or settlement
- importance of area in protecting, maintaining or replenishing coastal land or resources (including flood plains, aquifer rechange area, sand dunes, beaches, offshore sand deposits).

The following eleven designated geographic areas of concern have had citizen input and are the recommendations of the Buffalo Coastal Zone Management Program. They have been approved by the Planning Board of the City of Buffalo.

HERTEL SLIP AREA

I. DESCRIPTION

This shoreline area provides an excellent view of the Niagara River and Canada, especially from the Thruway. Although most of the area has been usurped by non-water-oriented commercial uses, there are two private marinas and a boat launch. Perhaps the most significant feature of this area is the intensity of development which has resulted in a milieu that is aesthetically depressing.

Two highrise apartment buildings have been constructed in the area and others are planned. Such development will seriously limit the view this area offers. It will also deter from any future tourist-oriented and recreation development which is badly needed along the waterfront if this aspect of western New York's economy is to be bolstered. It is anticipated that the proposed Riverwalk, which will pass through this area, will contribute significantly to this sector of the economy.

One set of proposed entrance and exit ramps for this section of the Thruway would necessitate the relocation of the Industrial Molasses Corp., resulting, however, in a net gain of 4.1 acres of waterfront open space, sorely needed here. There is strong public support for the development of park and recreation facilities in this area, and opposition to highrise construction.

II. BOUNDARY:

North: end Ontario Street boat launch
East : New York State Thruway
South: U. S. Corps of Engineers
West: Buffalo shoreline

III. CRITERIA:

Area with significant natural value - scenic view of Niagara River and Canadian shore

IV. EXISTING CONDITIONS:

- high rise apartment development
- industrial and commercial development
- two private marinas
- boat launch

V. PROPOSALS:

- proposed Riverwalk will increase public access to area
- one proposed exit ramp for Thruway would result in additional 4.4 acres open space
- more high rise apartment development could block views

VI. RECOMMENDATIONS:

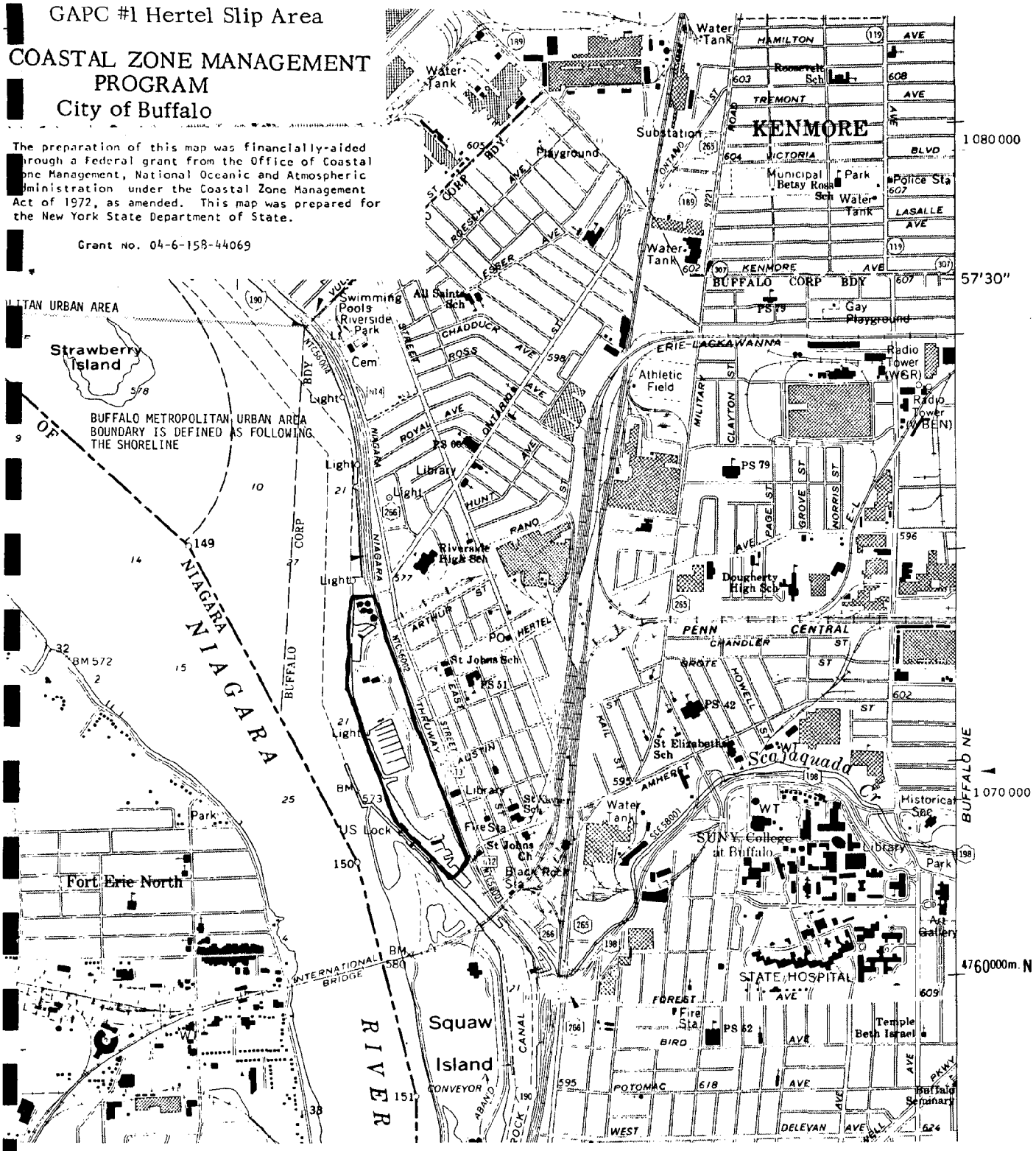
- support recreational/water oriented development
- maintain and increase public access
- insure continued operation of existing marinas
- areas for acquisition
  - if molasses plant ceases operation, acquire land for water oriented recreation
  - if trucking firm between Austin and Hamilton ceases use, insure water related/recreational use or acquire for public use

GAPC #1 Hertel Slip Area

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant No. 04-6-158-44069



SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

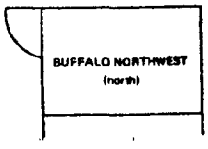
1 5 0 1 KILOMETER

Polyconic projection. 1927 North American datum.

1000-meter ticks based on the New York Transverse Mercator grid.

Between 72° and 78° West Longitude, this grid is identical to Zone 18 of the Universal Transverse Mercator grid. Areas east of 72° and west of 78° are direct mathematical extensions of Zone 18.

INDEX TO 1:9600 (1" = 800') MAP COVERAGE



NORTH END OF SQUAW ISLAND

I. DESCRIPTION

This area is significant because it is vacant waterfront land in a congested urban area. Since most of the area is fill, it presently awaits development. Most of the mainland shore areas near Squaw Island are being used for commercial purposes, but these should not impair the suitability of this location to development. Likewise, the Buffalo Sewer Authority's new sewage treatment facility, presently under construction on the south-end of the island will be compatible with development of the north end.

The development of recreation facilities on this site has been proposed by the Buffalo Master Plan and by The Urban River. This would complement the proposed Riverwalk, helping the region to realize the tourist and recreational value of the area. In addition, there is public support for park and recreation facilities at this location. The area has water access on three sides and will be accessible to pedestrians from the mainland.

The development of a diversion canal to regulate the water level of Lake Erie would substantially impair the future use of this site for public recreation.

The proposed All American Canal would require the use of most of Squaw Island and the construction of a new Black Rock Lock, probably utilizing most of the north end of Squaw Island.

II. BOUNDARY:

North end of island south to Buffalo Sewer Authority property line

III. CRITERIA:

Area which is proposed for conflicting uses

IV. EXISTING CONDITIONS:

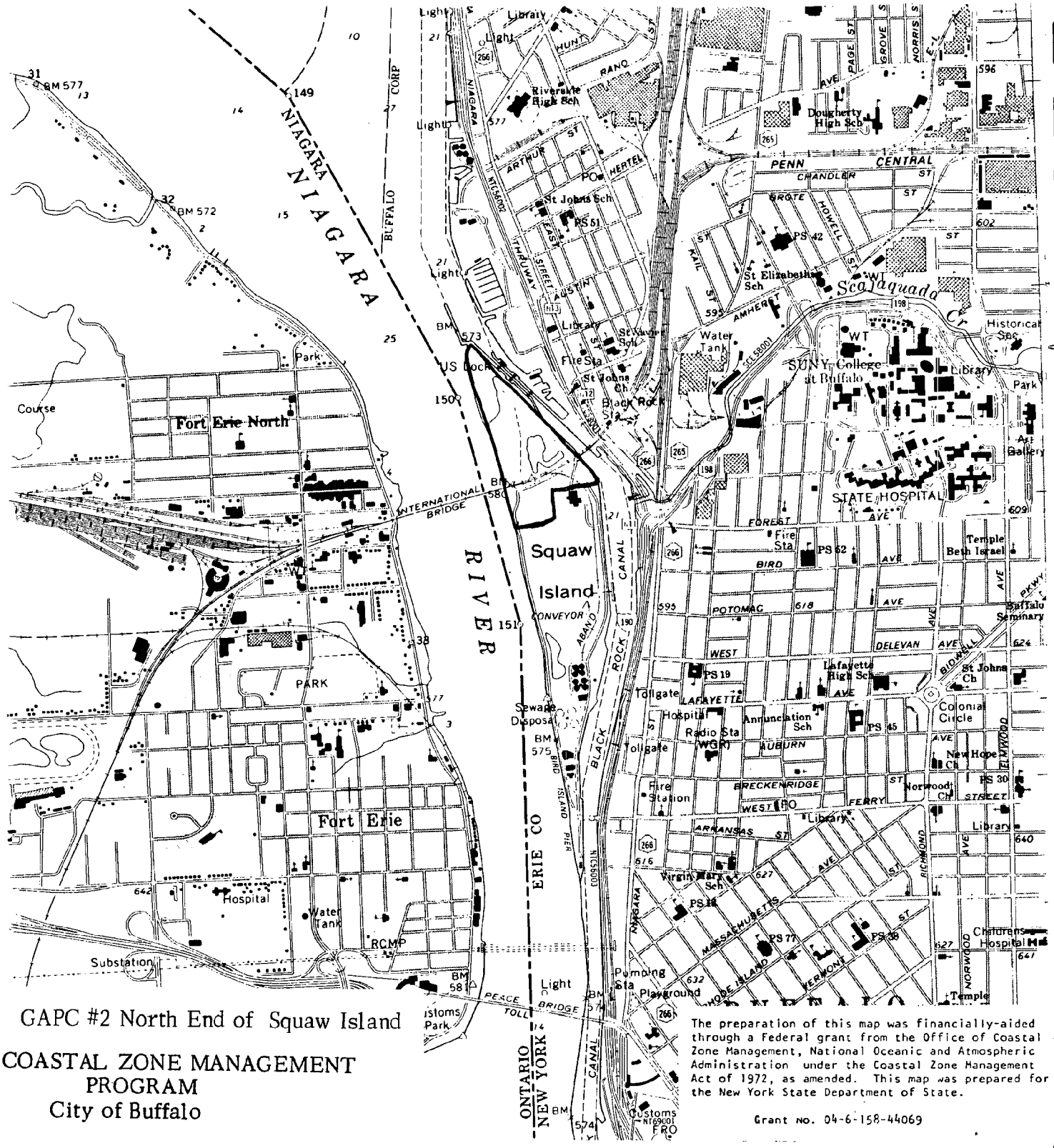
- Largely vacant area, partly fill and partly original land
- Buffalo Sewer Treatment Plant on southern end of island
- water access on three sides
- Buffalo solid waste incinerator

V. PROPOSALS:

- proposed recreational development
- proposed Riverwalk
- proposed diversion canal
- proposed All-American Canal
- proposed conversion of incinerator to transfer station

VI. RECOMMENDATIONS:

- develop alternative to diversion canal
- reserve area for waterfront park development



GAPC #2 North End of Squaw Island

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

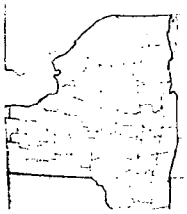
Grant No. 04-6-158-44069

SCALE 1:24000

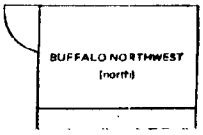
1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER



INDEX TO 1:9600 (1" = 800') MAP COVERAGE



Polyconic projection. 1927 North American datum.

1000-meter ticks based on the New York Transverse Mercator grid.

Between 72° and 78° West Longitude, this grid is identical to Zone 18 of the Universal Transverse Mercator grid. Areas east of 72° and west of 78° are direct mathematical extensions of Zone 18.

BLACK ROCK CANAL

I. DESCRIPTION:

The Black Rock Canal is an artificial waterway created in the 19th century by the construction of the Bird Island Pier. The Bird Island Pier isolates the channel from the turbulant and swift flowing waters of the Niagara River. The pier has been lengthened several times until it now reaches a point just short of the mouth of the Buffalo River. The current in the Black Rock channel is regulated by the use of the Black Rock lock. The present lock was constructed in 1914 and replaced several earlier structures. When traffic through the lock is limited, the flow in the canal nears zero.

The U. S. Army Corps of Engineers has suggested that the Black Rock Canal be used as a spillway channel to regulate the level of Lake Erie. The proposal would improve water quality in the canal at the cost of lost recreational opportunities in both land and water.

II. BOUNDARY:

North: Black Rock Locks
East : Buffalo shoreline
West : Squaw Island and Bird Island Pier and western edge of dredged Black Rock entrance channel
South: line extending west from Light #2 in Erie Basin Marina

III. CRTIERIA:

Area in need of environmental enhancement

IV. EXISTING CONDITIONS:

- heavily impacted area
- water pollution - due to source point of Buffalo Water Treatment plant

(Existing Conditions Continued)

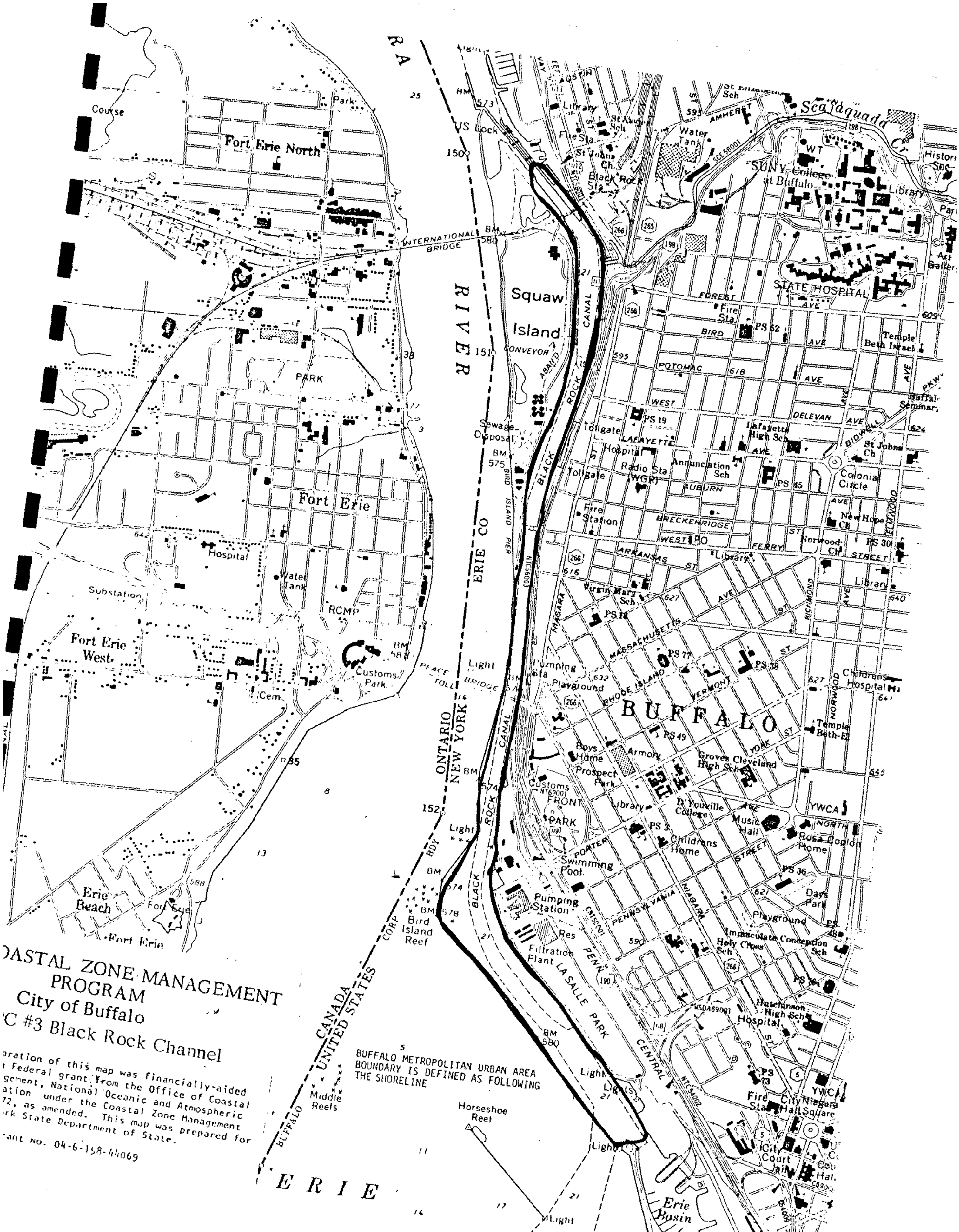
- 22' channel maintained by dredging
- popular fishing area

V. PROPOSALS:

- potential fish spawning area if pollution decreased
- diversion channel to bypass lock would increase flow-improve water quality
- dredging littoral areas for small boat use
- Delaware Park diversion canal will increase pollution
- All American Canal would require greatly enlarged channel

VI. RECOMMENDATIONS:

- protect littoral areas
- discourage unnecessary dredging
- eliminate pollution sources
- improve public access



OASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo
C #3 Black Rock Channel

aration of this map was financially-aided
Federal grant from the Office of Coastal
gement, National Oceanic and Atmospheric
ation under the Coastal Zone Management
72, as amended. This map was prepared for
rk State Department of State.
ant no. 04-6-158-44069

SCAJAQUADA CREEK

I. DESCRIPTION:

Scajaquada Creek is the focus of this area, running from the north side of the Buffalo State College Campus to the Niagara River. For the greater part of this distance, (west of Grant Street) an industrial district abutts to the north, and a warehousing district to the south. An elevated expressway interchange is positioned over the mouth of the creek, as is the expressway, which criss-crosses the creek before it descends to grade level.

In spite of these drawbacks, the area does offer potential access to the river. The creek itself is a resource and could offer space for a small boat marina, as pointed out in The Urban River. This same study also proposes that a trailway be incorporated along the creek to join the extension of Delaware Park on the north side of the Buffalo State College Campus with the Riverwalk on the shoreline. The juncture of the two trailways at the mouth of the creek would form a vest pocket park. If these plans are incorporated, shoreline access would be extended to bikers and hikers in the Delaware Park vicinity. A Scajaquada Creek Trailway would enhance the Riverwalk and its impact on the tourist industry in the region and would help the area in making a transition from its heavy dependence on manufacturing. Such a development would also be socially equitable because of the increased number of citizens who would thus have quick, safe access to the shoreline.

Additionally, Scajaquada Creek serves as a modified duck and gull habitat. If water quality were improved, it could also serve as a fish habitat and spawning area.

Although the state of industrial and warehousing development along the creek deters from its suitability for recreational uses, such a drawback could be at least partially overcome if industry and business were to improve the conditions of areas adjacent to the creek. The only management control existing for this area is zoning, which permits warehousing and industry.

II. BOUNDARY:

Intersection of Niagara Street and Tonawanda Street, follow line 200' from northern bank of Scajaquada Creek or 100' from the ROW of the Scajaquada Expressway whichever is greater - continuing to the dam at Howell Street ... continuing 200' from south bank of Scajaquada Expressway - whichever is greater, to Black Rock Canal.

III. CRITERIA:

Area subject to water pollution, undeveloped recreation resource

IV. EXISTING CONDITIONS:

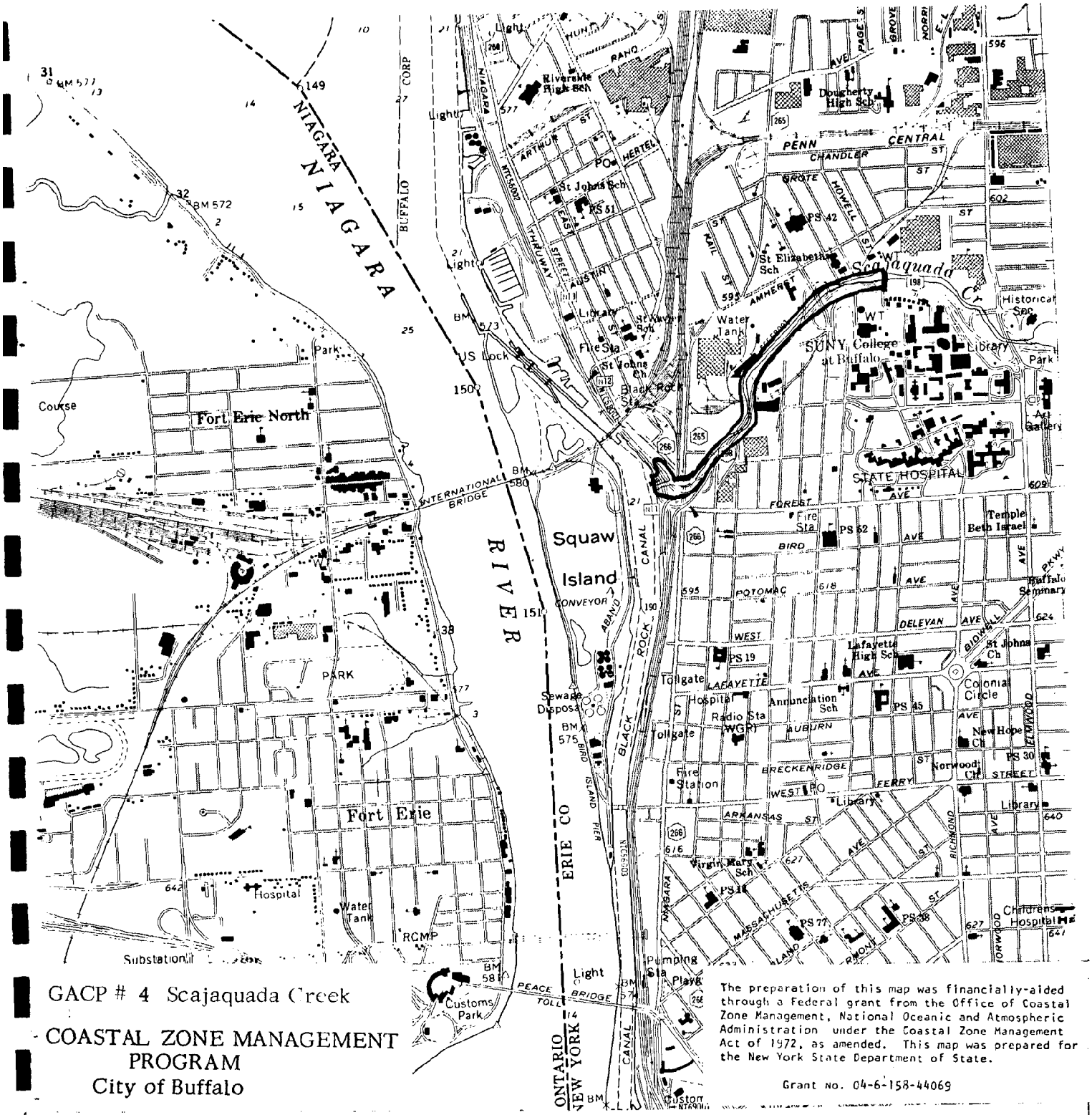
- elevated expressway over much of creek
- modified duck and gull habitat
- industrial development north of creek and warehousing to south
- storm sewer overflow from Delaware Lake/ Scajaquada Creek causes pollution

V. PROPOSALS:

- potential small boat marina
- access to Niagara River shoreline from Delaware Park via Trailway
- potential fish spawning area
- proposed 4 acre park facility located below entrance - exit ramps of the Scajaquada Expressway at its junction with the Niagara Thruway

VI. RECOMMENDATIONS:

- designation as area for preservation and restoration
- acquisition of land for recreational use as it becomes available
- measures to improve fish habitat
- improved public access



GACP # 4 Scajaquada Creek

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant No. 04-6-158-44069

SCALE 1:24000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

INDEX TO 1:9600 (1" = 800') MAP COVERAGE

BUFFALO NORTHWEST (north)

Polyconic projection. 1927 North American datum.

1000-meter ticks based on the New York Transverse Mercator grid.

Between 72° and 78° West Longitude, this grid is identical to Zone 18 of the Universal Transverse Mercator grid. Areas east of 72° and west of 78° are direct mathematical extensions of Zone 18.

NIAGARA RIVER

I. DESCRIPTION:

Historically, the Niagara River has been an area of major significance to both Canada and the United States. As an international boundary, an area of intense tourist and recreational activity and a region of heavy industrial and population concentration, the Niagara River has acted as a catalyst for the development of the Niagara Frontier.

The River System constitutes an irreplaceable resource which could be destroyed if appropriate action is not taken to protect and improve it. Its condition will be a major factor in determining the future quality of the area.

II. BOUNDARY:

West : International boundary
North: end of Squaw Island
East : Squaw Island and Bird Island Pier
South: line extended from foot of Porter Street to International boundary

III. CRITERIA:

Area which is threatened by water regulation schemes

IV. EXISTING CONDITIONS:

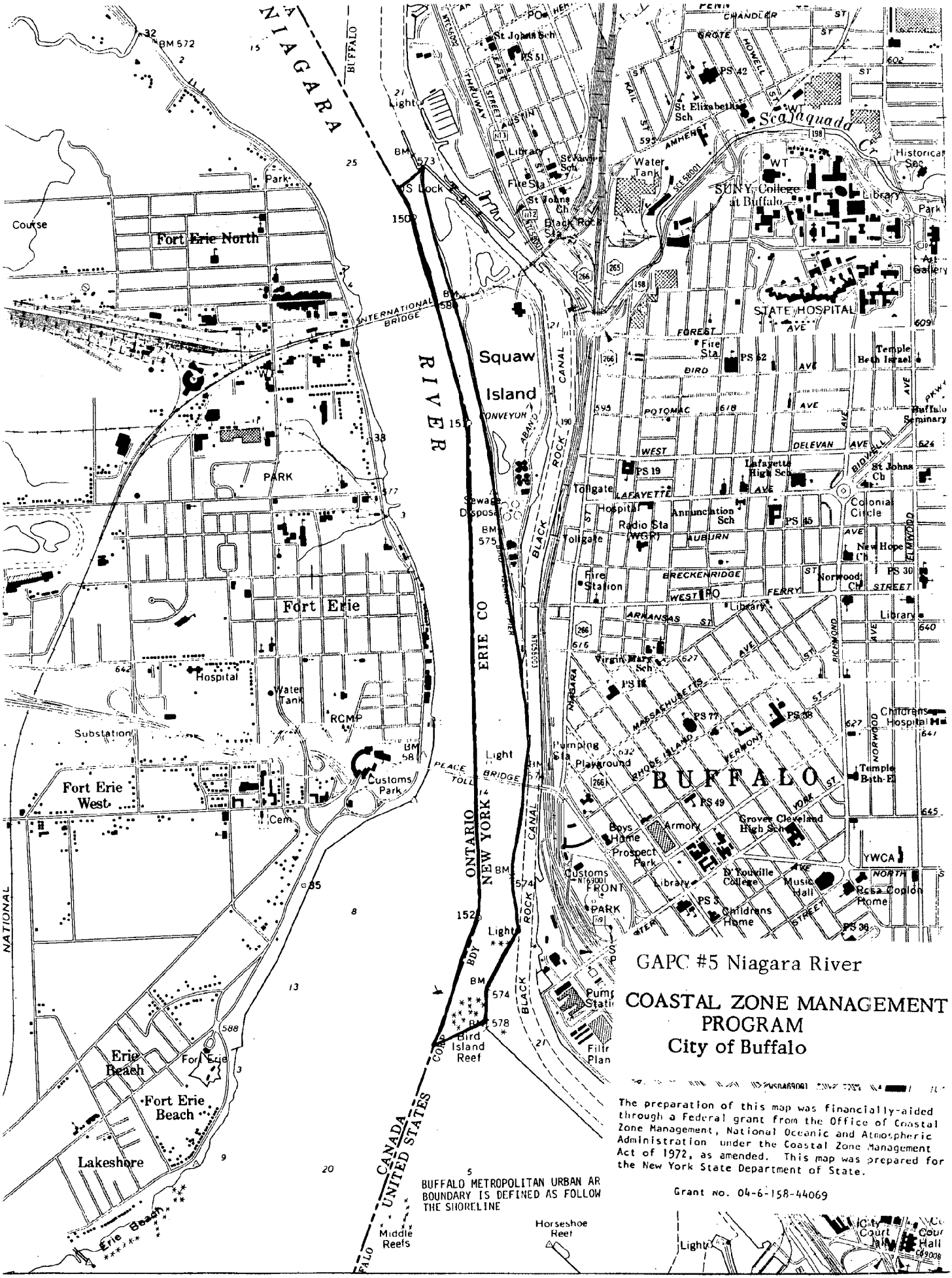
- shoreline and river of unique natural beauty
- combined sewer system of Buffalo causes polluting discharges
- limited public access

V. PROPOSALS:

- All-American Canal
- Diversion structures (2) to regulate water level of Lake Erie
- pollution due to point and non-point source discharges

VI. RECOMMENDATIONS:

- maintain existing natural features
- prevent dredging and blockage of flow
- improve water quality through elimination of point and non-point source discharges
- improve public access along shore



GAPC #5 Niagara River

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant No. 04-6-158-44069

WATERFRONT - URBAN RENEWAL AREA

I. DESCRIPTION:

This area of prime real estate is situated adjacent to downtown Buffalo and to the newly developed Erie Basin Marina. Because the Niagara Section of the New York State Thruway severs it from the rest of the city, the only access to this area is from the south. For this reason, it is of extreme improtance that future development respect the need for and preserve access to the waterfront. Similarly, it is important that development which generates great amounts of traffic be restricted to the southern portion of this area, which is most readily accessible by automobile.

This section is in close proximity to the lower West Side, the most densely populated of Buffalo's neighborhoods. Park and recreation development here would serve this neighborhood, as well as the region, and therefore, should accommodate the pedestrian.

The City of Buffalo does not presently have any people-oriented development which focuses on the waters of Lake Erie or the Niagara River. Development which transpires in the waterfront urban renewal area should be oriented to the water and should act as a magnet to draw people to the area.

II. BOUNDARY:

Urban Renewal tract A as shown on City of Buffalo map - April, 1976

III. CRITERIA:

- opportunity for public access
- scenic value
- opportunity for water oriented development
- conflicting proposals for development

IV. EXISTING CONDITIONS:

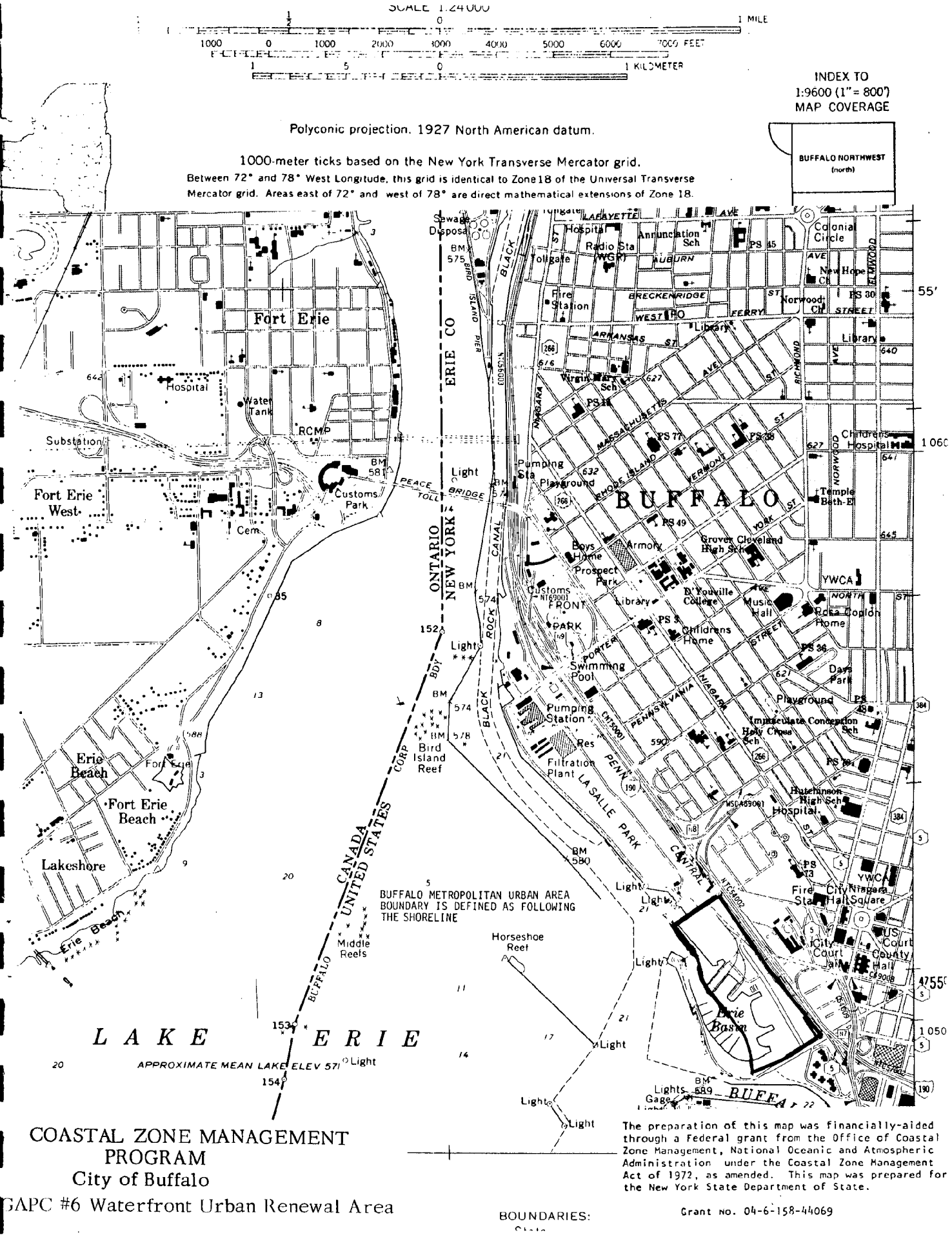
- Proximity to downtown and densely populated inner-city neighborhoods
- renewal land cleared and ready for development.

V. PROPOSALS:

- Riverwalk
- residential development
- commercial development
- Theme Park - private recreational development

VI. RECOMMENDATIONS:

- insure water-oriented development
- maintain and improve public access
- develop public recreational facilities



COASTAL ZONE MANAGEMENT PROGRAM

City of Buffalo

GAPC #6 Waterfront Urban Renewal Area

BOUNDARIES:

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant No. 04-6-158-44069

TIMES BEACH

I. DESCRIPTION:

The land area of Times Beach before World War II was used as a recreational area. This use ceased as the waters surrounding the area increased in pollution and became unsafe. The Corps of Engineers constructed a rubble-mound dike offshore from Times Beach to hold dredgings from the Buffalo Harbor area. The dredged material contains nutrients which allow terrestrial and emergent aquatic vegetation to flourish. The site is no longer used for disposal and has provided a variety of habitats, including deep water, shallows, silt flats and wooded uplands which attract many birds.

II. BOUNDARY:

West : harborline
North : U. S. Coast Guard property
East : Fuhrmann Blvd. R.O.W.
South : Southern boundary of diked disposal area, extending to Fuhrmann Blvd.

III. CRITERIA:

Essential habitat for living resources
Present state of area threatened

IV. EXISTING CONDITIONS:

Wetland

V. PROPOSALS

- fill and convert to coal unloading
- recreation development
- residential development
- national wetland
- wildlife habitat

VI. RECOMMENDATIONS:

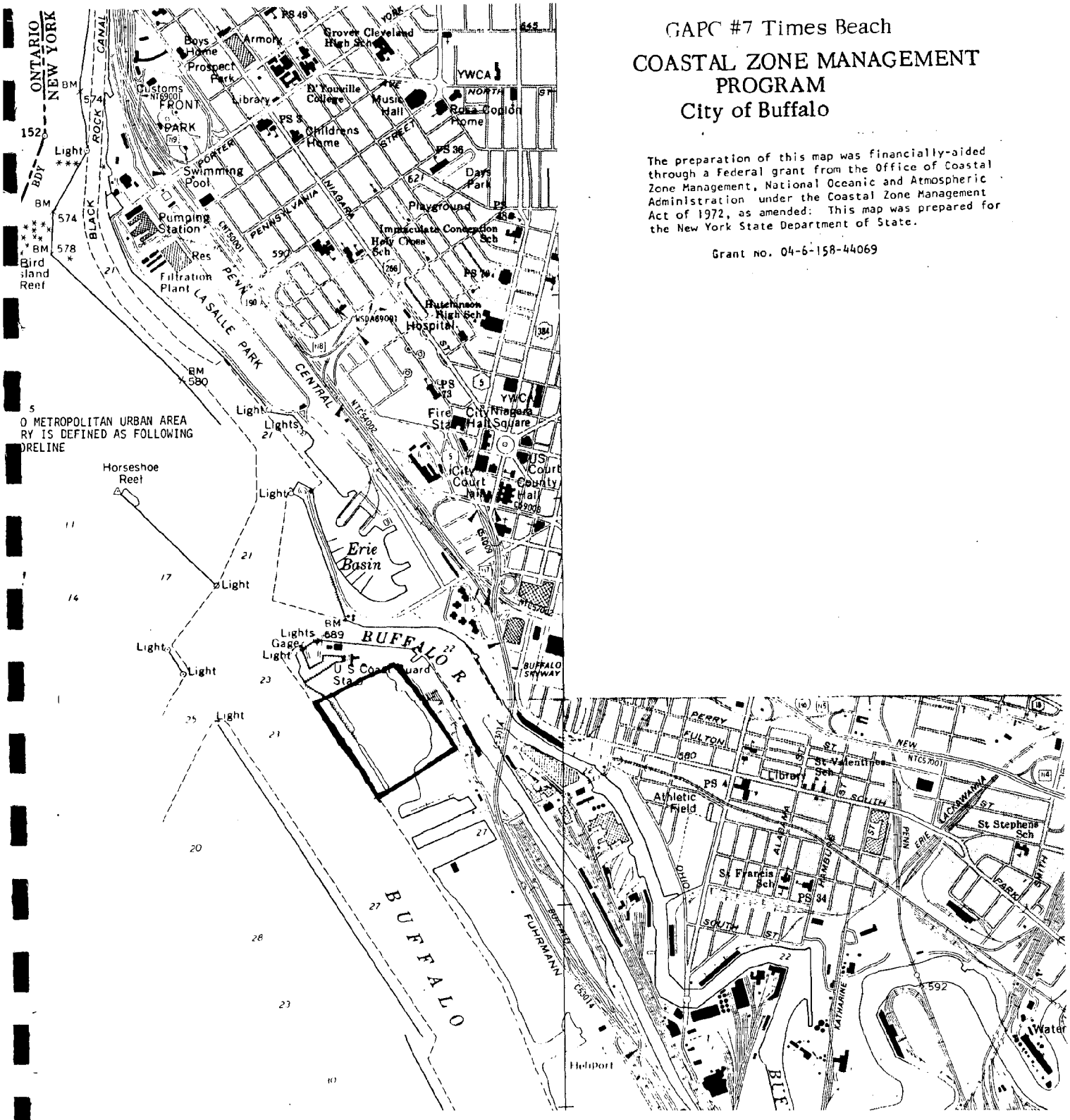
- preservation of natural habitat

GAPC #7 Times Beach

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended: This map was prepared for the New York State Department of State.

Grant no. 04-6-158-44069

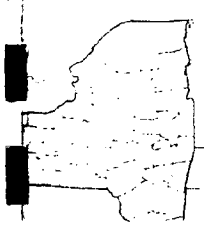


SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

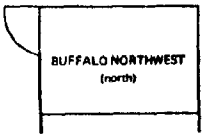
1 5 0 1 KILOMETER

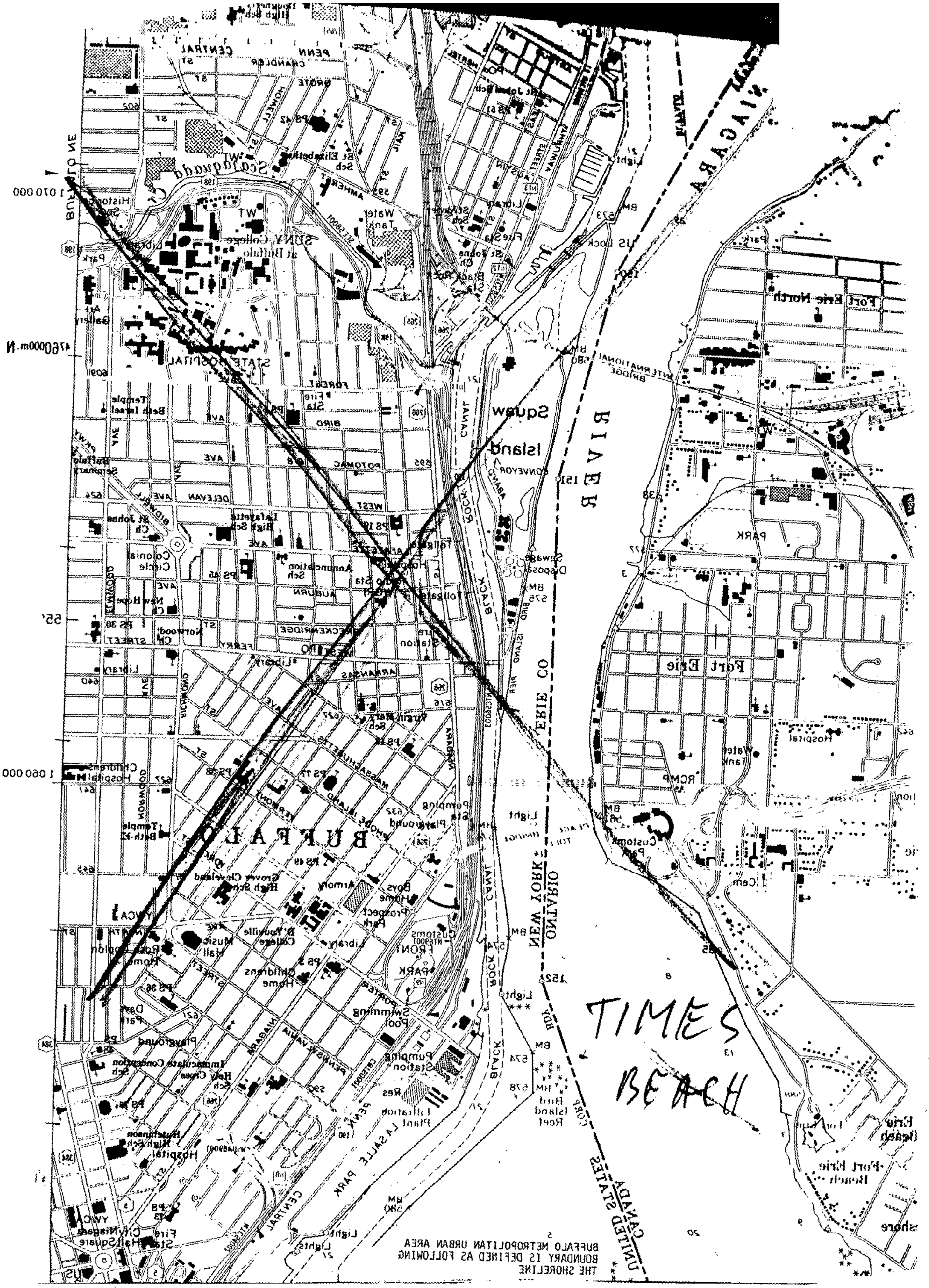


Polyconic projection. 1927 North American datum.

1000-meter ticks based on the New York Transverse Mercator grid.
Between 72° and 78° West Longitude, this grid is identical to Zone 18 of the Universal Transverse Mercator grid. Areas east of 72° and west of 78° are direct mathematical extensions of Zone 18.

INDEX TO
1:9600 (1"= 800')
MAP COVERAGE





TIMES
BEACH
BUFFALO
Squaw
Island
Port Erie
Port Erie North
NEW YORK
ONTARIO
CANADA
UNITED STATES
ERIE CO
BUFFALO METROPOLITAN URBAN AREA
BOUNDARY IS DEFINED AS FOLLOWING
THE SHORELINE

OUTER HARBOR

I. DESCRIPTION:

The Port of Buffalo outer harbor is formed by the existance of two breakwaters, which extend from the mouth of the Buffalo River to the southern city line. Over the years, the land area of the port has been enlarged by depositing fill and dredged material from the various sources. The Port has the capacity for seven ocean-going vessels at its piers, providing both bulk and open storage facilities. The area between the breakwater is maintained at approximately a depth of 27 feet. The Port is generally usable from April to January.

II. BOUNDARY:

North : southern boundary of Black Rock Channel GAPC
West : breakwaters of the Outer Harbor
South : city line
East : Fuhrmann Blvd.

III. CRITERIA FOR DESIGNATION:

- significant scenic area (view)
- transitional characteristics

IV. EXISTING CONDITIONS:

- port facilities
- water related industry
- undeveloped area
- non-water related industry

V. PROPOSALS

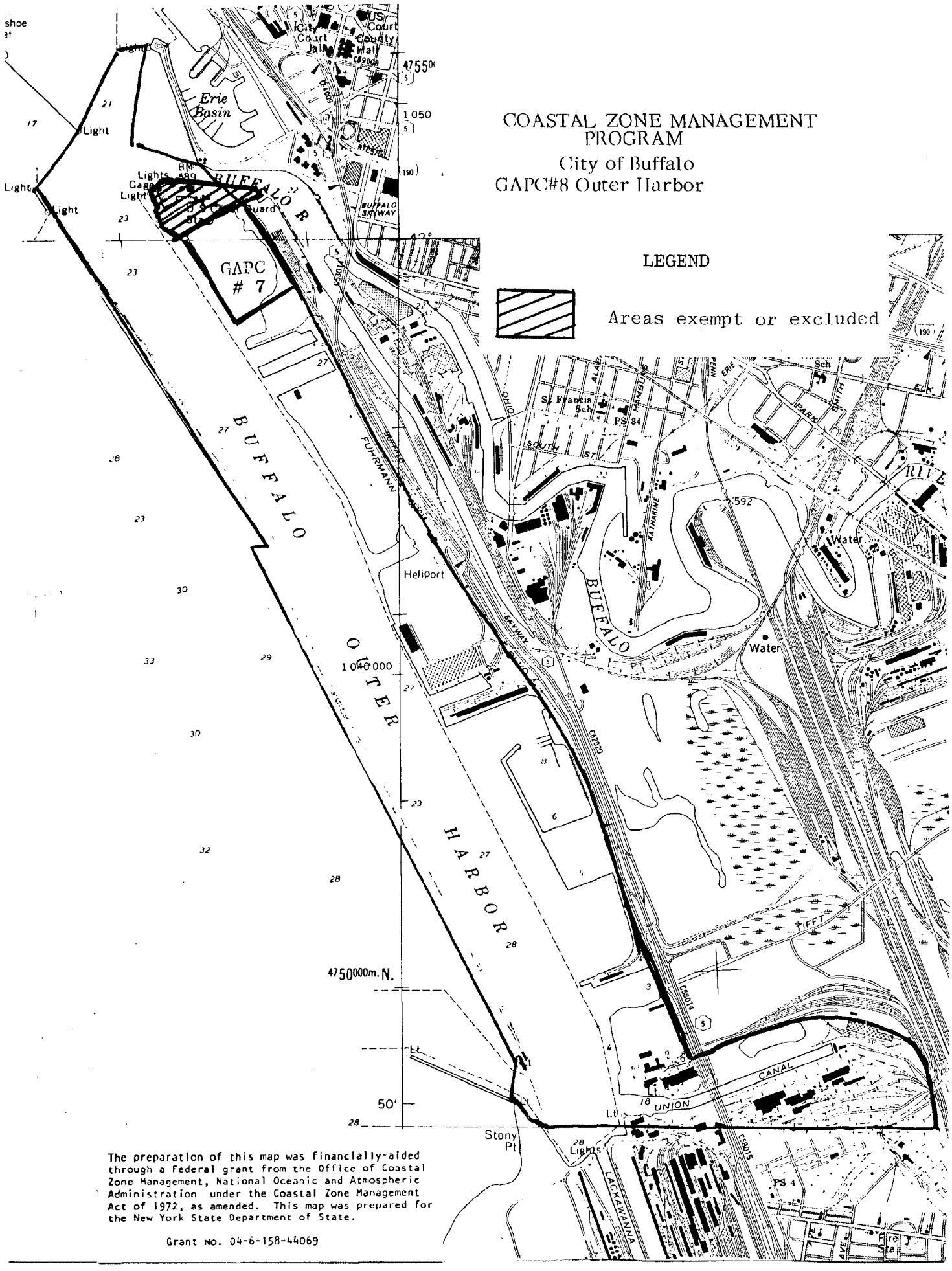
- realign Buffalo River
- develop transshipment site for western coal
- promote foreign trade zone

VII. RECOMMENDATIONS:

- encourage port facilities
- consider future relocation if found feasible
- encourage water related industry/commerce
- encourage recreational development where appropriate, linking and existing recreation facilities
- encourage water-related residential development if Port relocation makes new land use patterns feasible
- discourage non-water related uses

COASTAL ZONE MANAGEMENT PROGRAM

City of Buffalo
GAPC#8 Outer Harbor



The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant NO. 04-6-158-44069

INNER HARBOR

I. DESCRIPTION:

This area is in the throes of transition. While there is still considerable amount of heavy industry along the Buffalo River, much of the formerly industrial land stands vacant or underused. Port activity in the Inner Harbor has declined significantly since the opening of the St. Lawrence Seaway, and there is little reason to anticipate any resurgence.

Proposals have been made to realign the river, the most recent one being in The Buffalo River/Buffalo Creek Open Space Preservation Plan. The mouth of the river might then be located south of Freezer Queen, and the "oxbow" would be removed. The major advantages resulting from such an endeavor would be:

- increased depth of the river, possible because of deeper bedrock;
- the resultant accommodation of Seaway-draft vessels in the river;
- possible expansion of port activity and related industry in the inner harbor;
- increased accessibility to the outer harbor and Kelly Island, resulting from filling in of portions of the Buffalo River and the Buffalo Ship Canal. Much of this area is presently unsewered although planning is underway to extend service.

The environmental disadvantages resulting from the reduced littoral area due to the river realignment would have to be determined by an in-depth study.

II. BOUNDARY:

West : Fuhrmann Blvd.
North : Esplanade, Buffalo Skyway, N. Y. Thruway, Chicago Street, South Park Avenue,

Erie-Lackawanna Railroad, R.O.W., Buffalo Creek Railroad, R.O.W.

East : Bailey Avenue, Hopkins Street, Buffalo River and P.R.B. R.R. ROW

South : City line

III. CRITERIA:

- transitional characteristics
- possible public access to river

IV. EXISTING CONDITIONS:

- some heavy industry
- vacant industrial sites
- underutilization of railroad trackage
- lack of sewers
- some areas with flood hazard
- pollution of Buffalo River
- non-water related business using waterfront locations

V. PROPOSALS:

- realignment of Buffalo River
- land bank for future development
- develop recreational uses
- industrial development
- commercial development
- warehousing

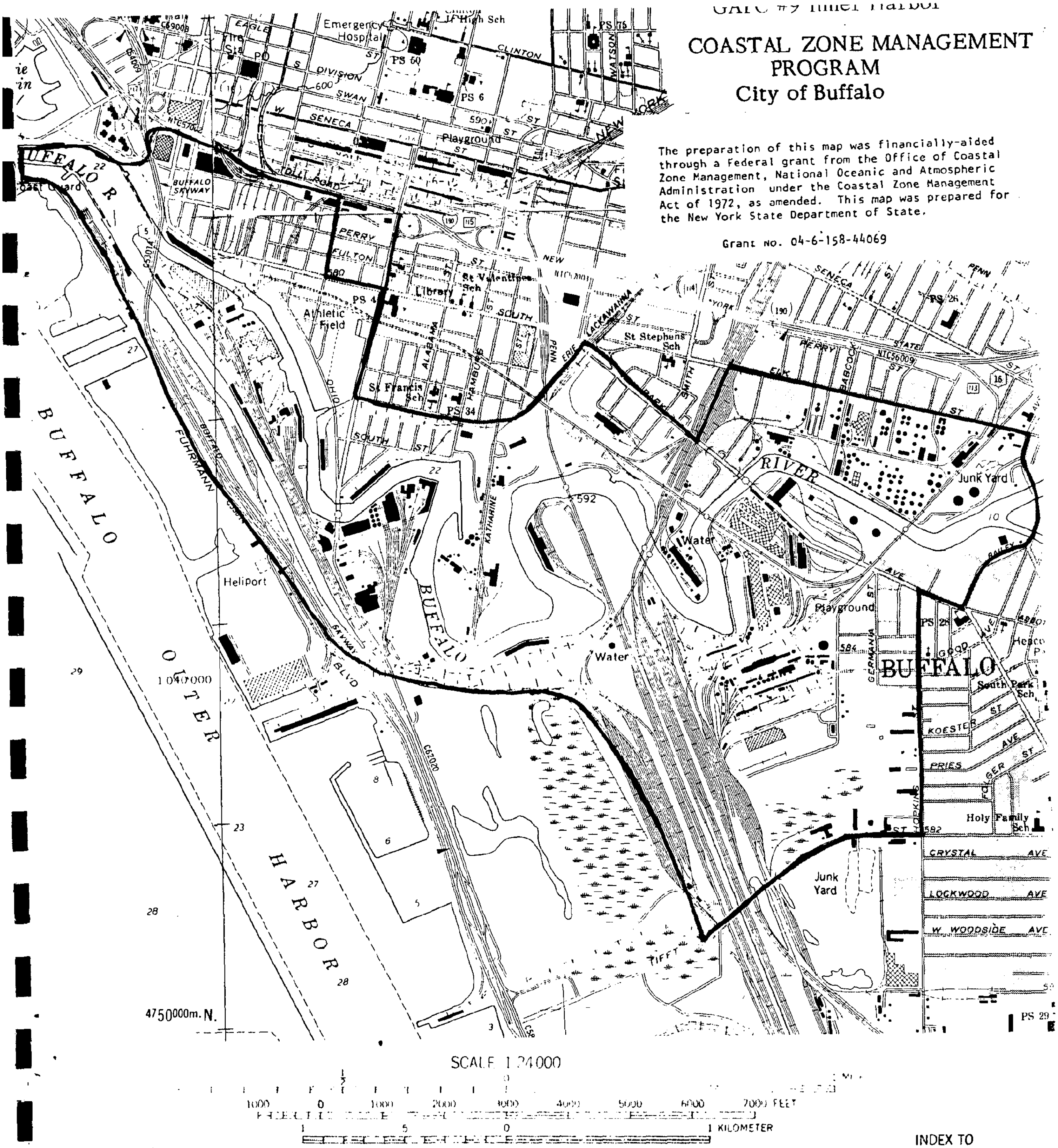
VI. RECOMMENDATIONS:

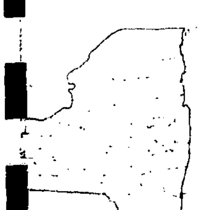
- creation of park and recreation areas in selected vacant land along river and elsewhere
- phasing out of non-water related industry
- elimination of excess railroad trackage - use as linear open space corridors
- further consideration of realignment alternatives
- encouragement of water related industry

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant no. 04-6-158-44069

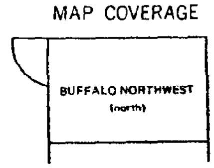




Polyconic projection. 1927 North American datum.

1000-meter ticks based on the New York Transverse Mercator grid.
Between 72° and 78° West Longitude, this grid is identical to Zone 18 of the Universal Transverse Mercator grid. Areas east of 72° and west of 78° are direct mathematical extensions of Zone 18.

INDEX TO
1:9600 (1" = 800')
MAP COVERAGE



BUFFALO RIVER

I. DESCRIPTION:

The area of this Section of the Buffalo River has developed basically as a residential area. The water quality of the River reached a high state of pollution. Newly initiated pollution controls have decreased the pollution. There are sites used for dumping. Current plans propose recreational and park use.

II. BOUNDARY:

West : Bailey Avenue
North : Elk St., Seneca St., Archer Ave., Penn Central RR ROW, Houghton Park, line parallel to River's edge, 200' north of river
East : City line
South : line parallel to river's edge, 200' south of river, property line between Avondale Pl. and Leamington Pl., Seneca St., Pomeroy St.

III. CRITERIA:

- existing open space along River suitable for recreational development

IV. EXISTING CONDITIONS:

- poor water quality
- location in identified flood plain
- incompatible mixture land uses

V. PROPOSALS:

- develop as park and recreation area
- proposed land use for both housing and industry

VI. RECOMMENDATIONS:

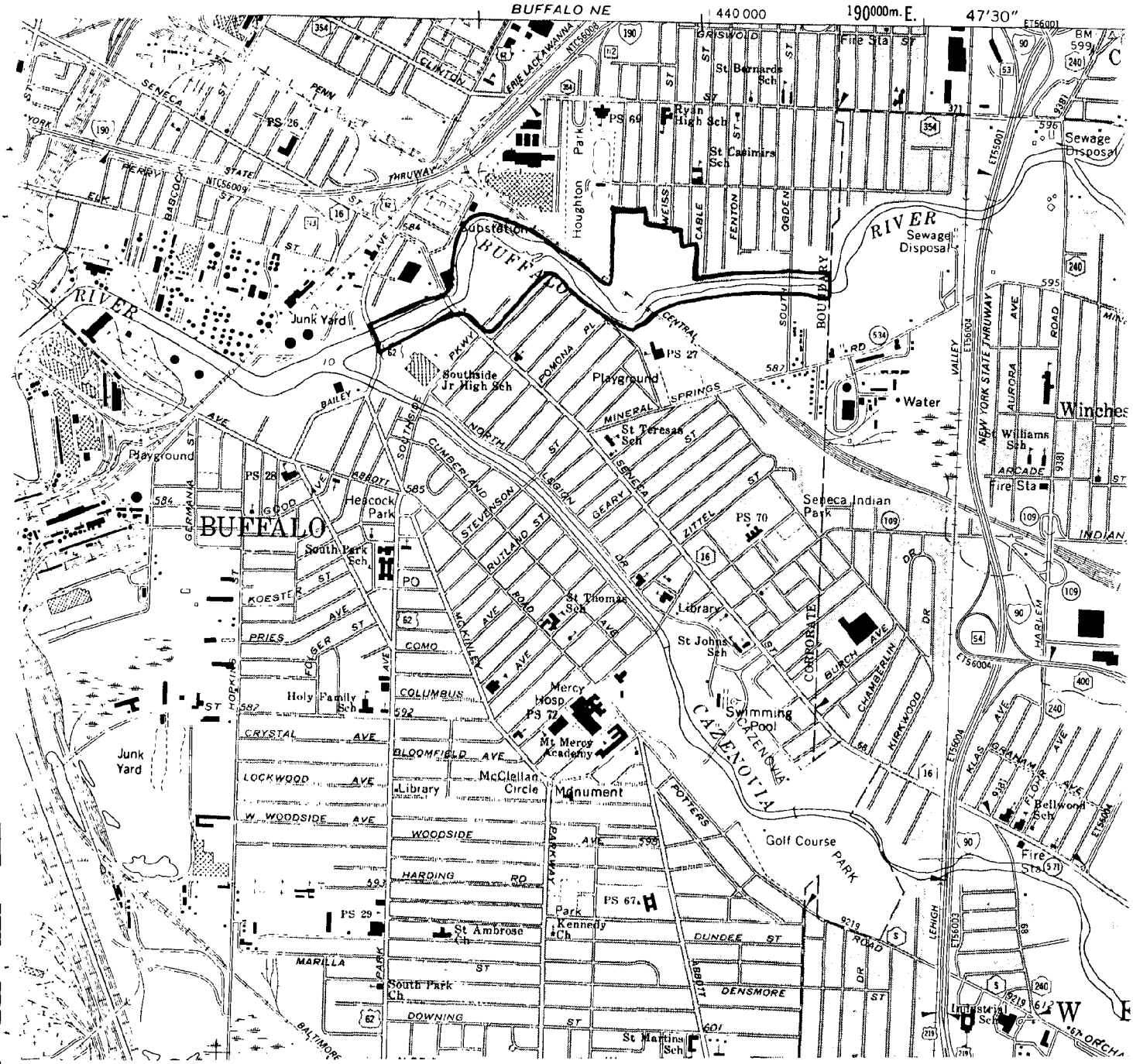
- Creation of park and recreation areas on vacant land along river
- restoration of fish habitat

GAPC #10 Buffalo River

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

through a federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant No. 04-6-158-44069

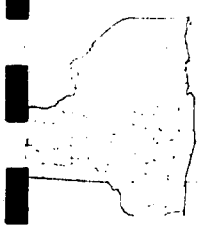


SCALE 1:24000

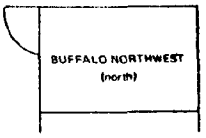
1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER



INDEX TO 1:9600 (1" = 800') MAP COVERAGE



Polyconic projection. 1927 North American datum.

1000-meter ticks based on the New York Transverse Mercator grid.

Between 72° and 78° West Longitude, this grid is identical to Zone 18 of the Universal Transverse Mercator grid. Areas east of 72° and west of 78° are direct mathematical extensions of Zone 18.

TIFFT FARM AND TRIBUTARY AREAS

I. DESCRIPTION:

Before the development of the City of Buffalo, the area known as Tifft Farm contained swamps and marshes. The need arose to expand the port facilities to serve the booming industrial growth of the area. Since there was no breakwater providing a protected outer harbor as there are now, the area was drained and dredged to create a system of interior canals, wharves and warehouse facilities. Railroads were laid across the site with bustling coal and lumber docks replacing the wildlife habitats. Construction of the South Harbor Breakwater eventually made the port facilities obsolete and they were abandoned. Fires destroyed many of the warehouses and docks and portions of the canals collapsed or were filled in. For awhile, it was used as a municipal garbage dump. Eventually even that use was discontinued.

It was abandoned for about twenty years. The need for a place to transfer two million cubic yards of municipal refuse from the Squaw Island Disposal site focused attention on Tifft Farm. The southwest portion of the site was used for the material and it was graded and covered to form a series of hills. The area is being developed as a managed natural resource and environmental education center.

Tifft Farm is part of a larger ecosystem which includes South Park and the areas between the park and Tifft Farm which serve as a conduit and storage area for water flowing from South Park. The

long term viability of the Tifft Farm wetlands requires that efforts be made to insure a stable water supply by protecting the upstream drainage and storage areas.

II. BOUNDARY:

North	:	Lehigh Valley RR ROW
East	:	Penn Central RR ROW, Tifft St., Hopkins St., B. R. and P. RR. ROW, City line
South	:	City line, Penn R.R. ROW
West	:	Fuhrmann Blvd.

III. CRITERIA:

- Essential habitat for living resources

IV. EXISTING CONDITIONS:

- Wetlands
- flow of ground and surface water from South Park to Tifft Farm
- vacant areas subject to redevelopment

V. PROPOSALS:

- industry

VI. RECOMMENDATIONS:

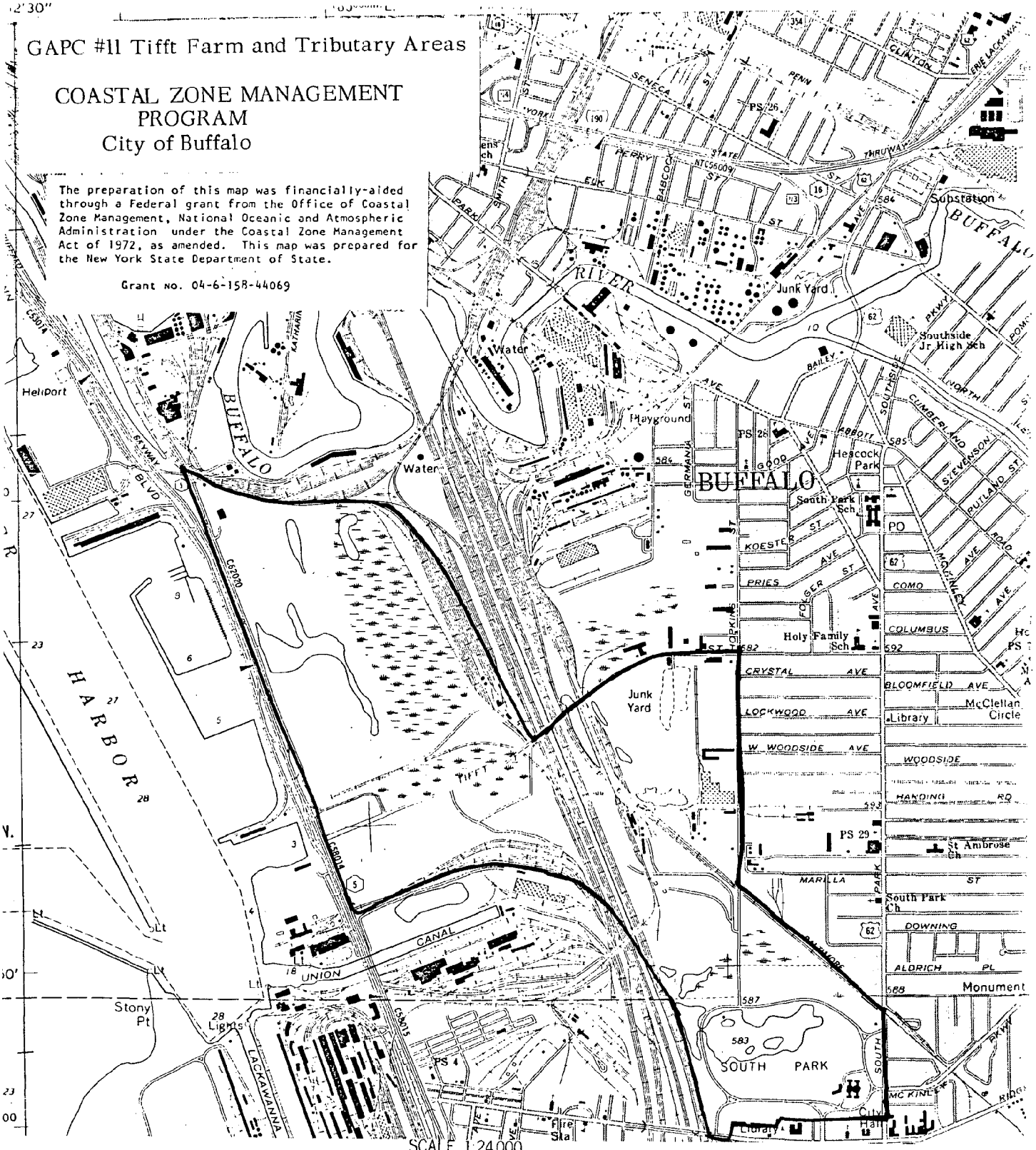
- preservation of Tifft Farm as a wildlife habitat
- regulate development in tributary areas of Tifft Farm to protect quality of water sources
- provide flowage easement and trailway between South Park and Tifft Farm

GAPC #11 Tifft Farm and Tributary Areas

COASTAL ZONE MANAGEMENT PROGRAM
City of Buffalo

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant No. 04-6-158-44069

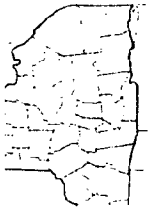


SCALE 1:24000

1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

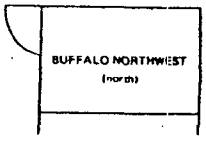


Polyconic projection. 1927 North American datum.

1000-meter ticks based on the New York Transverse Mercator grid.

Between 72° and 78° West Longitude, this grid is identical to Zone 18 of the Universal Transverse Mercator grid. Areas east of 72° and west of 78° are direct mathematical extensions of Zone 18.

INDEX TO 1:9600 (1" = 800') MAP COVERAGE



SOURCES:

City of Buffalo Master Plan.

Buffalo River/Buffalo Creek Recreation and Open Space Preservation Plan - ENCRPB, July, 1975.

Niagara River Environmental Plan, Summary Report ENCRPB, June, 1972.

Environmental Assessment Statement for the Regional Water Quality Management Study, ENCRPB, October, 1973.

The Urban River, ENCRPB, October, 1974

Port of Buffalo Niagara Frontier Transportation Authority, 1974/75 handbook.

Buffalo Sewer Authority Annual Report 1974-1975.

New York State DOT Upstate Public Ports Study, F. R. Harris, Inc., February, 1976.

Insight 1976, State of the City, Buffalo, New York, November, 1976.

Lake Erie/Lake Ontario Waterway, New York, U. S. Army Corps of Engineers, Buffalo District, October, 1973.

Delaware Park Comprehensive Development Plan, City of Buffalo, March, 1976.

International Environmental Study: Environmental Enhancement of the Niagara River, ENCRPB, November, 1971.

Coastal Zone Management, Coastal Zone Management Institute, November, 1974.

District II South Buffalo Community Development Plan, July, 1976.

District 12 Buffalo River Community Development Plan, July, 1976.

Buffalo Metropolitan Area, New York Water Resources Management, U. S. Army Buffalo District Corps of Engineers, December, 1975.

Project Report IV Design Report and Draft Negative Declaration, New York State Department of Transportation, December, 1976.

Lake Erie Waste Water Management Study, Corps of Engineers, Buffalo District, December, 1975.

Annotated Bibliography for Lake Erie Great Lakes Laboratory, October, 1974.

ATTACHMENTS

A - Areas for acquistion

B - Recommended methods for acquisition

C - Areas having problems demanding immediate attention

D - Summary report of existing information on wildlife habitat in the Coastal Zone Area

E - Report on water quality in the Coastal area

F - Coastal Zone resource types

G - Resource area

Maps used in determining Geographic areas of particular concern:

H - Coastal Zone Boundary

I - Scenic and aesthetic areas

J - Sensitive natural features

K - Significant coastal views

L - Sites of historic and archeological significance

M - Riverwalk Trail

Photographs of large scale maps on file with the City of Buffalo:

N - Current land use

O - Current zoning map

P - Proposed new zoning ordinance map

Q - Sewer Mains

R - Water Mains

S - Flood Hazard Areas

Report on sites for designation for Preservation, Restoration, and Development (Attachment T)

COASTAL ZONE MANAGEMENT

CITY OF BUFFALO

APRIL, 1977

AREAS FOR ACQUISITION

Policy

- Areas in Coastal Zone which have potential public use should be acquired as they become available, due to discontinuance of existing uses.
- Areas having significance for natural acquatic habitat should have first priority.
    - Second priority would be essential habitat for terrestrial and aviary species.
    - Areas with recreational significance, third priority.

SPECIFIC AREAS

First Priority

- Areas along Scajaquada Creek as it becomes available
- Areas between South Park and Tifft Farm as they become available. In order to protect the future of Tifft Farm as a wetland, it is necessary to assure the continued flow of water to that area from its source, South Park. An easement is proposed to include 100 feet on either side of the stream which runs from South Park to Tifft Farm. This easement could provide a bicycle/ pedestrian access between the two areas.

- Areas along Buffalo River (GAPC #10) as they become available

Second Priority

- Times Beach area be maintained as an essential terrestrial habitat for wildlife.

Third Priority

- The site of the molasses facility, should the Thruway ramp cause closing of the plant, it be acquired for recreation.
- North End of Squaw Island. This is presently a solid waste area owned by the City. When this function ceases, the area should be developed for recreational uses.

COASTAL ZONE MANAGEMENT
CITY OF BUFFALO
APRIL, 1977

RECOMMENDED METHODS FOR ACQUISITION

#1. FEE SIMPLE PURCHASE - The most common and best understood method of open space acquisition is "fee simple" or outright purchase of the land. Since the technique involves a total taking of the land, it is the most costly, therefore, other devices should be used at those times where complete control of the land is not required.

#2. AFFIRMATIVE EASEMENTS - An affirmative or positive easement permits the public use of the land (usually along a linear strip) while ownership is retained by the private owner or owners. This method is often used for fishing rights along stream banks or for trails.

#3. NEGATIVE EASEMENTS - Negative easements prevent undesirable private use of private lands as opposed to the affirmative easement which permits public utilization of private lands. Since the private landowner does not have to fear public use of his property, he often will find a negative easement more palitable.

#4. LEASING - The leasing of private land for public purposes is similar to positive easements with the major difference that leasing contracts are for short time periods while easements are for considerable (if not perpetual) lengths of time. Generally, leasing should be considered only a stop-gap solution for open space needs. Nevertheless, it does provide public access to provide at considerably lower costs than that of outright acquisition.

#5. DEVELOPMENT RIGHTS - A new device is the purchase of development rights. Its applicability to a Coastal Zone program would be basically same as the negative easement. Whereas, and easement is generally restricted to a corridor, a development rights restriction can be purchased over an extensive area.

#6. PUBLIC AND PRIVATE LEASE-BACK ARRANGEMENTS - Public purchase and lease-back to private developers might be done in waterfront areas where the developer might use only a portion of the total land area, or in other areas where the private facility may constitute a major portion of the entire site.

In intensively developed areas, land acquisition costs are often very high. A government might assemble land for private developers where the development would be in the bublic interest. For example, such a case might be an urban renewal project that would open up the Lake Erie shoreline to public use while offering private housing facilities in adjacent low and mid-rise buildings.

AREAS HAVING PROBLEMS DEMANDING IMMEDIATE ATTENTION:

AREA 1: Hertel Slip Area:

- protection of view of Canadian Shore
- protection of Shoreline and future development encroaching on public access

AREA 2: North end of Squaw Island

- proposed plans for regulation of Great Lakes Water Levels includes diversion canal across northern end
- Master Plan City of Buffalo designates area for residential use

AREA 3: Niagara River

- proposed plans for regulation of Great Lakes Water Levels includes down south of International rail road bridge
- current plans for Niagara River indicate increased recreational use

AREA 4: Niagara River South of the Peace Bridge, a dam is proposed as part of the Corps of Engineers Lake level control project.

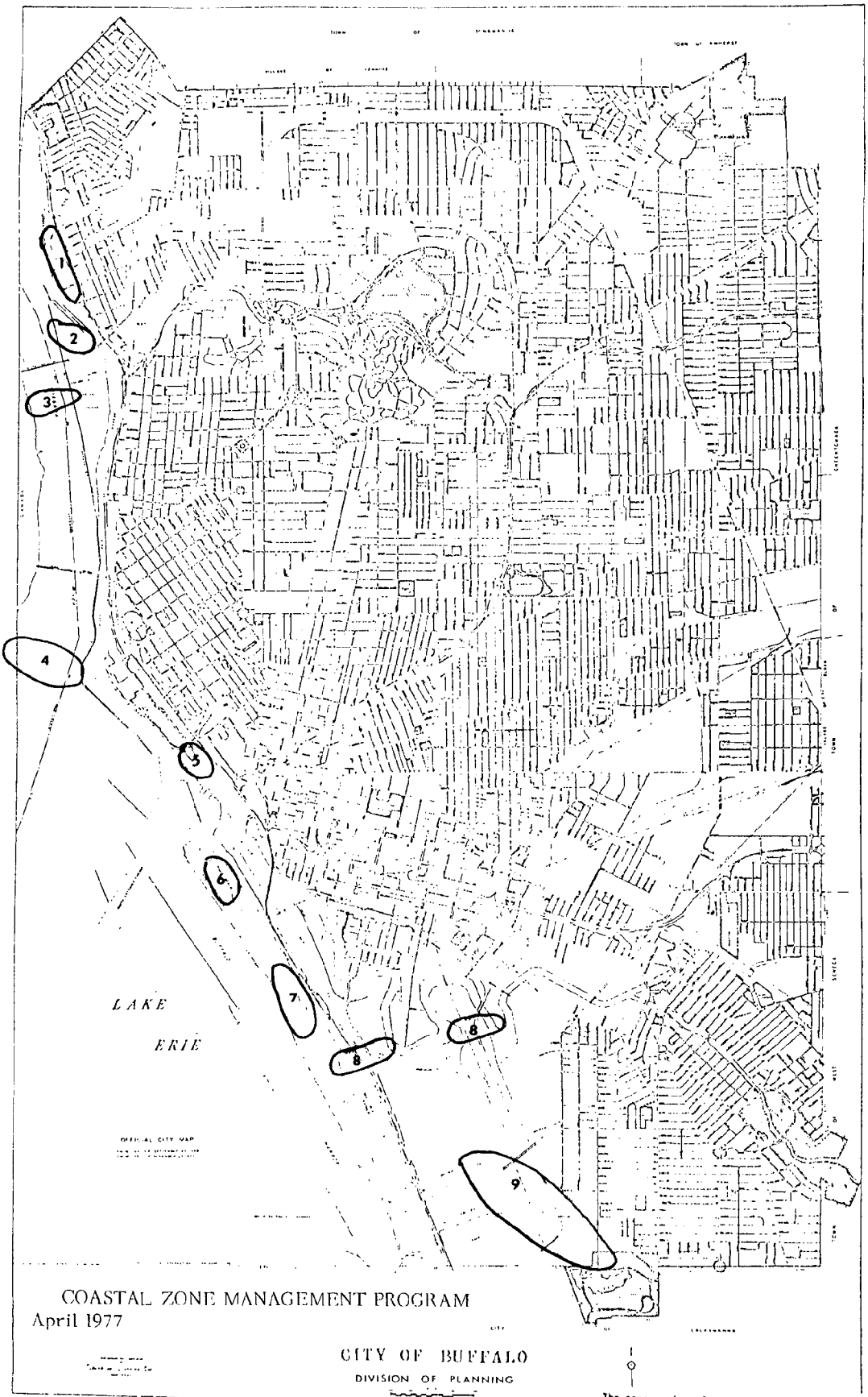
AREA 5: South end of La Salle Park, a city park has been included in a proposed Buffalo Urban Renewal Project.

AREA 6: Times Beach has developed as a wetland and wildlife sanctuary. Expansion of the Port of Buffalo by the Niagara Frontier Transportation Authority to facilitate landing of expected western coal shipments conflict with existing use.

AREA 7: Area projected for receiving land fill from the excavation for the Mass Transit System. Development would increase area available for expanded Port of Buffalo facilities, but would reduce littoral areas.

AREA 8: Buffalo River - proposed realignment to increase use by larger freighters. Vacant industrial land would be in prime location for redevelopment.

AREA 9: To protect Tifft Farm's status as a wetland, the water flow from South Park needs to be protected.



Areas having problems demanding immediate attention

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.

Grant No. 04-6-158-44069

TASK 7.3

ATTACHMENT D

SUMMARY REPORT OF EXISTING INFORMATION ON WILDLIFE HABITAT IN THE COASTAL ZONE AREA

TASK 7.3 SUMMARY REPORT OF EXISTING INFORMATION ON WILDLIFE HABITAT IN THE COASTAL ZONE AREA

The City of Buffalo is a major industrial and transportation center. Major industrial areas are located near the Buffalo Harbor and along Lake Erie and northward along the Niagara River. Despite the urbanization of the City, the location on the shores of Lake Erie encourages wildlife. Certain areas within the City such as Tifft Farm and Times Beach provide "natural" habitats for wild life. The city is located on the Atlantic Flyway. Thousands of ducks, geese and other waterfowl skirt around Lake Erie each spring and fall and use the wetlands within Buffalo as resting places. The location at the eastern end of Lake Erie also makes it a focal point for water-oriented birds moving eastward along both the north south shores of the lake.

Two major wildlife habitats will be discussed in detail in this report: the Times Beach area and the Tifft Farm Nature Preserve. Other areas deserving mention are:

Scajaquada Creek	- Modified wetlands providing areas for ducks and gulls.
Buffalo River	- Contains fields and shrub areas which support mammals and birds.
Harbor within Breakwater and Niagara River	- Natural habitats for resting and feeding of waterfowl. Donnelley's pier off the north breakwater contains a colony of nesting herring and ring-billed gulls.
City Parks	- Most parks are too manicured to support much wildlife.

TIFFT FARM

Tifft Farm is an urban nature preserve of 275 acres. Originally a delta of the Buffalo River, it was dredged and modified in the late 1800's to form a coal transfer site with canals and intersecting railroad sidings. In the early 1900's

Tifft Farm was abandoned. Its use as a site for coal and lumber docks shifted to use as a municipal garbage dump. By 1970, Tifft Farm was almost totally reclaimed by nature. The site was acquired as a nature preserve and refuse material in the southwest portion graded and sculptured to form a series of artificial hills. The area contains the following major habitat areas: open water, cattail marsh (with small scattered "pockets" of phragmites marsh), old-field savannah, sprout forest and mature willow forest. The eastern one-third of the site is a relatively undisturbed cattail marsh, being invaded on the western border by aspens. The southern border of the site is an abandoned road right-of-way bordered by mature trees, largely willows, with a fairly dense understory. Abandoned canals create about 15 acres of open water with vegetation: sumac, elderberry along the banks. There is an additional two acre pond at the northern end of the cattail marsh. The upland marsh edge habitat contains dogwood and forms a dense human barrier while creating an effective travel land, winter shelter, food supply and nesting substrate for wildlife. The remainder of the site is upland habitat in various stages of succession, being invaded by aspen and locust in the drier areas, elm and maple in the moister areas and cottonwood and willow in the wet areas.

Following are wildlife by class that are found in Tifft Farm:

Amphibians and Reptiles:

-mudpuppies, newts, leopard frogs, American toad

-Snapping turtle, painted turtle, northern water snake, garter snake, Eastern milk snake

Birds:

98 species of birds have been identified. The complete list is as follows:

Horned Grebe	Green-winged Teal	Red-breasted Merganser
Pied-billed Grebe	Blue-winged Teal	Sharp-shinned Hawk
Double-crested Cormorant	American Wigeon	Cooper's Hawk

Great Blue Heron
Green Heron
Cattle Egret
Common Egret
Black-crowned Night Heron
Least Bittern
American Bittern
Whistling Swan
Canada Goose
Mallard
Black Duck
American Coot
Killdeer
American Golden Plover
Black-bellied Plover
American Woodcock
Common Snipe
Spotted Sandpiper
Solitary Sandpiper
Willet
Greater Yellowlegs
Lesser Yellowlegs
Knot
Pectoral Sandpiper
White-rumped Sandpiper
Baird's Sandpiper

Shoveler
Wood Duck
Redhead
Ring-necked Duck
Canvasback
Greater Scaup
Lesser Scaup
Common Goldeneye
Bufflehead
Ruddy Duck
Hooded Merganser
Rock Dove
Mourning Dove
Yellow-billed Cuckoo
Black-billed Cuckoo
Barn Owl
Snowy Owl
Long-eared Owl
Short-eared Owl
Whip-poor-will
Common Nighthawk
Chimney Swift
Ruby-throated Humming-bird
Belted Kingfisher
Yellow-shafted Flicker
Red-headed Woodpecker

Red-tailed Hawk
Red-shouldered Hawk
Rough-legged Hawk
Marsh Hawk
Osprey
Sparrow Hawk
Ring-necked Pheasant
King Rail
Sora
Yellow Rail
Common Gallinule
Rough-winged Swallow
Barn Swallow
Cliff Swallow
Purple Martin
Blue Jay
Common Crow
Black-capped Chickadee
Tufted Titmouse
White-breasted Nuthatch
Red-breasted Nuthatch
Brown Creeper
House Wren
Winter Wren
Long-billed March Wren
Catbird

Short-billed Dowitcher
Stilt Sandpiper
Semipalmated Sandpiper
Western Sandpiper
Glaucous Gull
Iceland Gull
Greater Black-backed Gull
Lesser Black-backed Gull
Herring Gull
Ring-billed Gull
Common Tern
Caspain Tern
Black Tern
Yellow-throated Vireo
Solitary Vireo
Red-eyed Vireo
Philadelphis Vireo
Warbling Vireo
Black and White Warbler
Prothonotary Warbler
Golden-winged Warbler
Blue-winged Warbler
Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Northern Parula

Yellow-bellied Sapsucker
Downy Woodpecker
Eastern Kingbird
Great Crested Flycatcher
Eastern Phoebe
Yellow-bellied Flycatcher
Acadian Flycatcher
Alder Flycatcher
Least Flycatcher
Eastern Wood Peewee
Horned Lark
Tree Swallow
Bank Swallow
Prairie Warbler
Palm Warbler
Ovenbird
Northern Waterthrush
Kentucky Warbler
Connecticut Warbler
Mourning Warbler
Yellowthroat
Yellow-breasted Chat
Hooded Warbler
Wilson's Warbler
Canada Warbler
American Redstart

Brown Thrasher
American Robin
Wood Thrush
Hermit Thrush
Swainson's Thrush
Gray-checked Thrush
Veery
Blue-gray Gnatcatcher
Golden-crowned Kinglet
Ruby-crowned Kinglet
Cedar Waxwing
Northern Shrike
Starling
Purple Finch
Common Redpoll
Pine Siskin
American Goldfinch
Rufous-sided Towhee
Savannah Sparrow
Vesper Sparrow
Slate-colored Junco
Tree Sparrow
Chipping Saprrow
Field Sparrow
Bay-breasted Warbler
Blackpoll Warbler

Yellow Warbler	House Sparrow	Pine Warbler
Magnolia Warbler	Bobolink	Scarlet Tanager
Cape May Warbler	Eastern Meadowlark	Cardinal
Black-throated Blue Warbler	Red-winged Blackbird	Rose-breasted Grosbeak
Myrtle Warbler	Northern Oriole	Indigo Bunting
Black-throated Green Warbler	Rusty Blackbird	- - - - - - - - - - - -
Blackburnian Warbler	Common Grackle	
Chestnut-sided Warbler	Brown-headed Cowbird	

Mammals:

-meadow mice and muskrats
-masked shrew
-short tail weasel
-mink - dog, wild
-fox, gray
-eastern cottontail rabbit
-whitetail deer

TIMES BEACH

Since the turn of the century, the U. S. Army Corps of Engineers has regularly dredged the harbors of the Great Lakes to enable deep-draft commercial vessels to use the harbors. Dredged material was disposed of in the open lake. Open-lake disposal has been banned by the U. S. Environmental Protection Agency as the bottom sediments were too polluted. A study conducted by the Corps in 1969 showed that containment of dredged material in diked areas was the least costly alternative to open-lake disposal. In 1970, Congress directed the Corps to construct diked disposal areas in Great Lakes harbors with polluted bottom sediments. The diked disposal site offshore from Times Beach is such an area and consists of rubblemound dikes on two sides and the shoreline on the other two, forming a closed area which prevents the dredged materials from re-entering the lake or harbor. The water

pumped into the site eventually evaporates or filters through the specially constructed dike and the solid matter settles to form dry land. The dredged material contains nutrients which allow terrestrial and emergent aquatic vegetation to flourish.

The Corps will not place any more dredged material in the Times Beach area since a large, permanent diked area at the southern end of Buffalo will hold future dredged materials. The City of Buffalo will study and research other possible dumping sites for the material expected to be dredged from Cazenovia Creek and Delaware Park Lake which previously was to be dumped at Times Beach.

The land below water at Times Beach was given to the City by the United States for public park and recreational purposes, with the United States retaining disposal rights for seven years. In June 30, 1978, the Department of the Interior will make a compliance inspection to determine what future action should be taken regarding use of the area. The littoral, or shore zone and the shallow zone are unique in the region and are key habitats at Times Beach which make it especially attractive for wildlife - particularly water fowl and shore birds.

Three other zones exist at Times Beach: a deeper water area up to about 2 meters in depth beyond the shallow water zone; a low lying silt flat where herbaceous plants flourish; and an upland zone containing tall herbs, grasses and stands of shrubs and trees. The site is characterized by vegetation succession on the terrestrial areas and variable plant development in the aquatic portions. Open grass and herbs are being replaced by pioneer shrub and tree growth. Sprout eastern cottonwoods are encroaching into the silt flat land and herbaceous plants, pale smartweed, swamp loose strife, cocclebur are expanding within it. The littoral and

shallow water zones contain terrestrial and aquatic plants - smartweed, arrowhead, hornwart and bullrish.

Species identified in the Times Beach area are as follows:

Waterfowl - whisting swans, Canada geese, snow geese, Cinnamon Teal, mullard, blue-winged teal, American wigeon.

Shore Birds - Willet, Western Sandpiper, Ling-billed Dowitcher, Marbled and Hudsonian Godwits, Ruff, American Avocet, Lesser Yellow Legs, Red Knots, Semi-palmated sandpipers, Short-billed Dowitchers

Gulls and Terns - Bonaparte's gulls, Ring-billed Gulls, Laughing Gulls, European Black-headed gull, Little gulls, Forster's Tern

Land Birds - Woodpeckers, Flycatchers, Swallows, Wrens, Thrushes, Warblers, Blackbirds, Finches.

No studies have been made of mammals on the site, but two species: the muskrat and the eastern Cottontail have been recorded.

NIAGARA RIVER AND HARBOR AREAS

Some of the most important fish species found in Lake Erie and the Niagara River are the Coho and Chinook salmon, rainbow and steelhound trout, brown trout, northern pike, muskellunge, large mouth and small mouth bass, yellow perch and walleye. Many of these species, especially trout and salmonoid are present because of the stocking program of the New York State Department of Environmental Conservation. The Buffalo River is considered an industrial river, hence no data was available on recreational fishing. The Great Lakes Laboratory of the State University College at Buffalo has been monitoring the area since 1969. The chemical and biological changes they have noted have been remarkable. In 1968, the entire river was devoid of oxygen from the late spring through the fall. No macroscopic bottom organisms were observed for most of the length of the stream During 1970, anaerobic condition decreased and sludge worms (oligochaetes) were found on the river bottom. Also, in 1972, oxygen was measured in the river from surface to bottom thus making it possible for fish from Lake Erie to navigate the stream. A "sheepshead" was caught by a teenager using a rod and reel in this year, the first time in many years that fish had been known to frequent the Buffalo River.

SOURCES:

- Andrle, R. F.: The Tifft Farm, A Biological and Ecological Synopsis, 1975

- Andrle, R. F.: Report on Times Beach-Dike Disposal Area #2, Buffalo, New York, 1975

- Andrle, R. F. 1972 Birds of the Tifft Natural Area in Buffalo, New York Prothonotary 38(7): 91-95.

- Andrle, R. F. - Report to DEC on Donnelley's Pier.

- Beardslee and Mitchel, H. D.: Birds of the Niagara Frontier Region: 22:478 pp.

- Clark, R. J.: Preliminary Report on Terrestrial Faunal Resources of the Tifft Farm (Including Spring and Summer Assessments) Erie County, Buffalo, New York, Ecoplans, Inc. Saratoga Springs, New York, 1973

- Ecoplans, Inc.: Master Plan Tifft Farm Technical Report, 1975, Saratoga Springs, New York.

- Wright, D. L. and Runner, R. R.: Buffalo Harbor Dike Disposal Sites, Engineering Properties and Drainage Characteristics, New York Sea Grant Institute, N.Y.S.S.G.P. - S.S. - 75 - 028.

- U.S. Army, Buffalo District Corps of Engineers, Interim Report On Feasibility of Comprehensive Water and Related Land Management, Dec. 1975.

TASK 7.3

ATTACHMENT E

REPORT ON WATER QUALITY IN THE COASTAL AREA

TASK 7.3: REPORT ON WATER QUALITY IN THE COASTAL AREA

The discussion of water quality for the City of Buffalo will include a summary of existing legislation dealing with water quality, status of the water and sewer systems in the City of Buffalo, and how the Coastal Zone Management Program will be able to address the identified problems.

EXISTING LEGISLATION

In 1972, the United States Congress passed the Federal Water Pollution Control Act. This Act set water quality standards and provided mechanisms for curbing pollution in navigable waters on a staged basis.

The Act established as a national goal, the elimination of pollutant discharges into the navigable waters by 1985. It further established an interim goal that by 1983 we would have national water quality which is safe for recreation and will protect fish and wildlife.

One portion of this law requires individuals and corporations to have a discharge permit before they can release any pollutants into the nation's waters. The Federal government allowed for the delegation of permit application issurance authority to the states under Section 402, National Pollutant Discharge Program.

The New York State Department of Conservation has the jurisdiction over quality and purity of Buffalo's water. These water quality standards have been approved by the EPA. The purpose of the State Pollutant Discharge Elimination System Permit is to locate and control point sources and to help bring those discharges into compliance with State and Federal water quality standards. No permits may be issued for point sources which are in conflict with approved 208 plans. The permit system provides an essential tool for the implementation of the overall 303 basin plans.

The 208 planning agency permit requirements and where needed to achieve the 1983 goals - recommend appropriate conditions for future permit issuance.

Section 404 of the 1972 Federal Water Pollution Control Act Amendments stipulate that the Secretary of the Army, acting through the Corps of Engineers, regulate the discharge of dredged or fill material in U. S. waters. The purpose of this regulation is to insure that the "chemical-biological integrity of waters of the United States is protected from the irresponsible and unregulated discharges of dredged or fill material that could permanently destroy or alter the character of these valuable resources". Along with the discharge of material which has been dredged or excavated from any waters of the United States, the following additional types of activities will also be regulated by this program: site developmental fills for recreational, industrial, commercial, residential and other uses; causeways or road fills; dams and dikes, artificial islands, property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters and bulkheads and fills, beach nourishment, levees, sanitary landfills, and backfill required for the placement of structures such as sewage treatment facilities.

Section 201, which deals with new facilities, must be consistent with 208 planning and 201 grants will be made only to management agencies designated in approved 208 plans.

BUFFALO WATER TREATMENT FACILITIES

The source of water for the water system of Buffalo is Lake Erie. The total water pumped each year is 34,500 million gallons servicing an average population of 430,000 people. The main pumping station is the Col. Ward at the foot of Porter

Avenue. A secondary pumping station, the Massachusetts, near the Peace Bridge, will be phased out when 6 pumps are replaced at the Col. Ward Station.

Under Section 402 (National Pollutant Discharge Program) of the Federal Water Pollution Control Act, the City of Buffalo Water Department has applied for a permit for their discharge of sludge from retaining tanks and back wash from filters. This application is pending. The Water Department has also applied for a grant to study alternative ways of handling this discharge. Negotiations are underway to explore the feasibility of a sewer connection between the water treatment plant and the sewer treatment facilities on Squaw Island. Consideration is also being given for increased sewer service to the Naval Reserve Station near the foot of Porter Avenue. To include the water treatment plant, the sewer facility would not have to be increased, nor the capacity of the treatment plant enlarged.

Another alternative would be to process the sludge to liquid aluminum sulfate which could be used in sewage treatment. This would eliminate 50% of the problem; the other part would be de-watered and a place sought to use as landfill. Since the water treatment plant is in an urban area where vacant land is scarce, this would pose a difficult problem.

Congress has passed the Pure Waters Act which will be effective July 1977. Guidelines have been set for material to be tested and equipment to use in such testing. The cost of increased water quality standards are to be born at the local level. The question is not one of increased water quality regulations but how the cost will be spread.

Buffalo was one of 80 cities selected for testing for hydrocarbons by the EPA. The long range effects of organic material in water needs to be studied. A filter system containing activated carbon is capable of removing organic materials and could in the future take the place wholly, or in part of existing filters of sand, gravel and hard coal, this being done before treatment with chlorine.

During the last two years, the Buffalo water system has not had to be concerned with taste and odor control in the treatment of its water.

BUFFALO RIVER IMPROVEMENT PROJECT

Completion of the Erie Canal in 1825 prompted additional dredging of the Buffalo River and the depth at the mouth was increased periodically. The increased navigability of the river provided more rapid and economical means of transporting raw materials and finished products, encouraged the establishment of heavy industry. Alterations to the upper watershed of the river occurred due to introduction of sewer lines. Widening and deepening of the channel decreased the flow rate of the river. During summer months, evaporation was high and precipitation low, there was little or no discharge from the Buffalo River. This created two major problems:

- industry along the river no longer had an adequate source of cooling waters and the recycling of river water resulted in surface temperatures that exceeded 40 D. C.
- pollutants deposited in the river during the late spring and summer were carried in a "slug" into the Buffalo Harbor and the Niagara River due to decreased evaporation and increased precipitation in the fall. These slugs had a detrimental effect on fish and fowl.

In response to this problem, four industries located along the Buffalo River formed the Buffalo River Improvement Project. 100,000,000 gallons per day have been pumped from an intake in Buffalo Harbor, located southwest of the Small Boat Harbor, to the participating industries. The corporations used the water for cooling in their manufacturing processes. The water also diluted their wastes prior to being released into the river. The additional volume provided low-flow augmentation.

Pollution controls caused more than a ninety-five percent decrease since 1969 in the discharge of industrial pollutants which included oil, iron and phenol, to the river. Water quality has increased dramatically. An indicator of this change occurred in 1972 when a sheepshead fish was caught in the river. This was the first time in 40 years fish have been reported in the Buffalo River. Their migration from the lake indicates that the pollution level is low enough to allow for fish survival. The main problem in the Buffalo River now is municipal discharges.

SCAJAQUADA CREEK

Scajaquada Creek is a relatively small stream originating in the Town of Lancaster. It flows through the Town of Cheektowaga and the City to its terminus in the Black Rock Canal. From its source, the creek first flows in an open channel until it reaches Pine Ridge Road about 800 ft. east of the City Line in the Town of Cheektowaga. The creek then runs from Pine Ridge Road to Forest Lawn Cemetary in Buffalo, a distance of about 19,000 ft. through a tunnel called Scajaquada Drain. The creek continues for about three miles via open channel through Forest Lawn Cemetary and Delaware Park Lake to its mouth in the Black Rock Harbor.

A grate structure was built in Scajaquada Drain at Main Street to divert flows into the Delavan Avenue tunnel sewer in an attempt to protect Delaware Park Lake from polluting discharges. Chemical and biological data unite in demonstrating that Scajaquada Creek is subject to organic pollution and nutrient loading.Overflows into Delaware Park Lake occur approximately six to eight times per year. A sewer line is being built which will eliminate nearly all sanitary waste pollutants now entering Delaware Park Lake.

BUFFALO SEWAGE TREATMENT

The City of Buffalo has its sewer treatment plant on Bird Island. This facility treats and disposes of an average sewage flow of 171.1 million gallons per day. A total of 9,030 tons of dry solids was removed from raw sewage by the coarse trash racks, fine screens, grit channels and primary sedimentation tanks. The primary clarifier equipment removed 7,418 tons of sludge solids. Prechlorination of the raw sewage has been continuously effected to insure discharge of a disinfected effluent to the Niagara River.

THE PURE WATERS ACT

Federal legislation designed to improve the quality of waterways required Buffalo to develop effective secondary treatment which would remove 85 to 90% of organic matter before it is released into the State's waters. This will reduce the oxygen load on the body of water and will prevent anaerobic or oxygen-lacking conditions. Anaerobic condition creates foul odors and are harmful to fish and other aquatic life as well as create aesthetically unpleasing conditions. This will be eliminated by the development of a secondary treatment plant now under construction on Bird Island.

In order to qualify for the Federal and State Grant aid to implement the Secondary Treatment Project, it was necessary to conduct an interior sewer study embracing the following problem areas:

- A study of existing combined sewers and a determination of what should and can be done within the system to reduce or eliminate polluting discharges.
- Formulation of a master plan of improvements, overflow controls and separation of sanitary and storm sewers.
- Adoption of official policies and annual remedial programs to reduce polluting discharges and to construct separate sewer systems.

The current main priority of the Buffalo Sewer Authority is the completion of the Squaw Island Secondary Treatment Plant. A master plan outlines a program that will be implemented as monies permit. Overflow controls are being developed and separation occurring as monies become available. The Buffalo Sewer Authority has control over all industrial discharges into the sewer system. These are monitored. One criteria for determining the admission of any industrial waste is whether or not the waste is amenable to treatment. If it contains an element that will inhibit the sludge digestion process, the waste must be pretreated to remove objectionable elements or reduce them in strength.

Kelly Island Sanitary Sewer Project is an enlargement of Buffalo's sanitary sewer system to service a previously unsewered 916 acres of industrial zoned land generally located along Ganson, Childs, Ohio, and Katherine Streets

and Fuhrmann Blvd. The facility would collect the sanitary and industrial wastes of all existing and future industry for transmission to BSA thereby eliminating their present discharge into the Buffalo River and Canal.

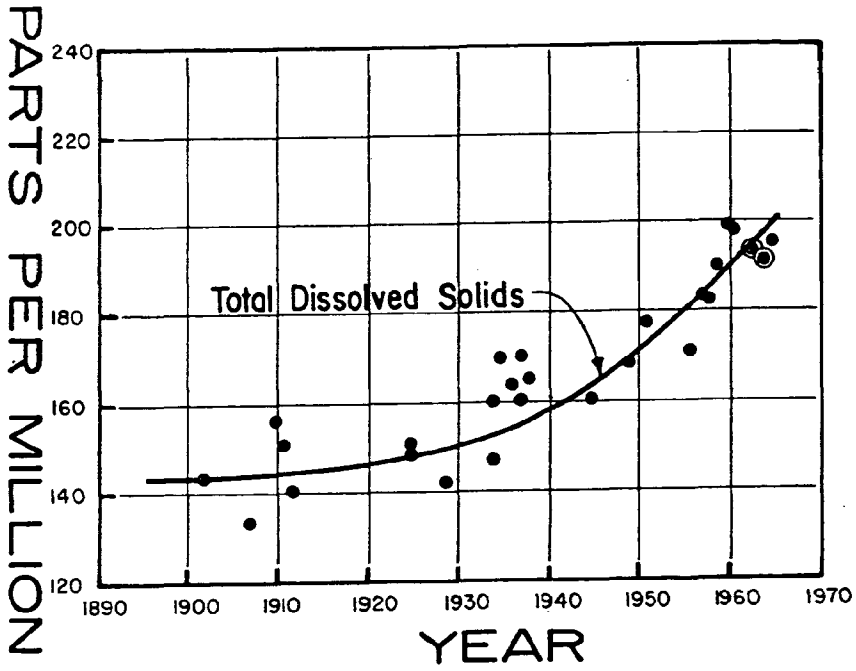
BLACK ROCK CANAL

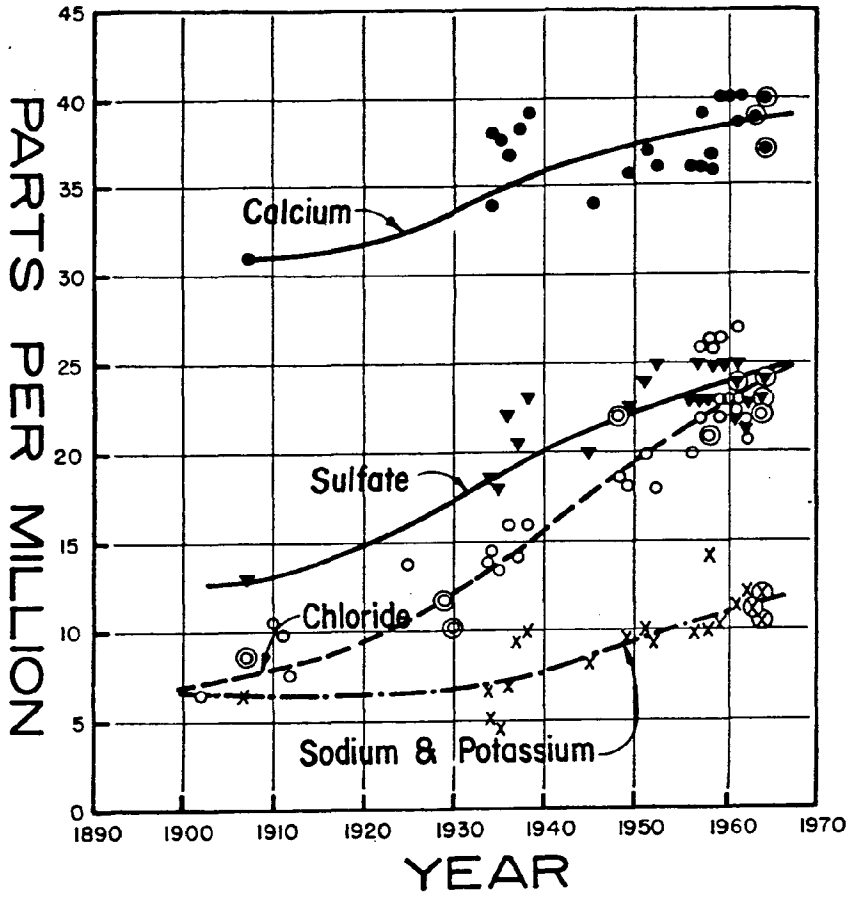
The Black Rock Canal, located directly adjacent to the western shoreline of Buffalo is classified by New York State as a body of water suitable for fishing and all other uses except as a source of water for drinking, culinary or food processing purposes and primary contact recreation. Previous reports by the New York State DEC and the U. S. Army Corp of Engineers both show Black Rock Canal water quality to be worse than that of the Niagara River, Buffalo River and Lake Erie in terms of dissolved oxygen, BOD, total coliform, orthophosphate, nitrate and benthic organisms.

Most of the combined sewer overflow discharges occur north of Ferry Street. This location is far from the southern end of the canal where lake water dilution and flushing can occur. The Schaeffer Brewery discharges a high organic load directly into this section. Buffalo Water Treatment Plant also discharges both backwash water and sludge into the southern portion of the canal. Both these institutions will begin discharging into the Buffalo sewer system.

LAKE ERIE

In 1970, data indicates that there has been a reduction in the overall dissolved oxygen content of lake waters. There also has been significant increases in total dissolved solids, calcium, chloride sodium-plus-potassium, and sulfates during the 1970 period of record, as shown on the following chart.





Changes in the chemical characteristics of Lake Erie. Circled points represent open-lake data (from Beeton, 1965); data for 1963 and 1964 are from the Lake Erie office of the Federal Water Pollution Control Administration; chloride, sulfate, and total dissolved solids for 1961 and 1962 are from Buffalo, New York, intake (U. S. Public Health Service, 1962).

Source: Statement on Pollution and Eutrophication of the Great Lakes, A. M. Beeton, May, 1970.

NUCLEAR WASTES

The Buffalo area is in a class #2 earthquake zone which means that there is a strong possibility that earthquakes will occur in the area. The Cattaraugus Creek flows into Lake Erie. Situated near the Creek, in West Valley, is a nuclear fuel re-processing plant with storage facilities containing hi-level nuclear wastes. If there was an earthquake, the storage tanks could be damaged. Because the creek flows into Lake Erie, much of the lake could become polluted with nuclear material.

GAS DRILLING

The drilling for gas in the Buffalo Coastal Waters of Lake Erie has been proposed recently. The possibility of contamination by released salt water or oil overflow from the drilling creates another threat to the water quality.

MANAGEMENT PROBLEMS

The following problems have been identified in water quality management in the Buffalo area:

- New York State does not have a shore monitoring program for Lake Erie. It is the only Great Lakes State that does not have.
- DEC regulations require testing at the outfall. Few measurements downstream are made as to what effect combination of existing water conditions and treatment discharge may have.
- The overall greatest problem of water quality in Buffalo area is effective monitoring. The program is divided between several layers of government and fragmented. An overall system analysis is needed with

resulting recommendations to improve the monitoring process.

- The State DEQ has stipulated that the sludge from the Buffalo Water Plant must be considered under the Section 402 as a discharge, hence needs a permit but no funding was provided for fulfilling new requirements.

- Coordination between regulations for improving water quality and the cost to implement these regulations.

- Increased regulations for the detection of substances in water that may have long term effects in humans.

- It is recommended that as the Coastal Zone Management Program for the State of New York is developed, these issues be incorporated into the management program.

- EPA is trying to integrate all efforts at the national level and assure proper coordination of the programs that deal with water quality. It is apparent that coordination is necessary at all levels of government to assure improvement of the quality of water starting with comprehensive planning and management on the local level.

These apparent problems that affect the quality of water for the City of Buffalo and which need addressing on a management and programmatic basis should be addressed in the State Management Program for the Coastal Zone.

Bibliography:

- Black Rock Channel and Tonawanda Harbor - U. S. Army Engineer District, Buffalo 1974
- Section 404 Permit Program - U.S. Army Corps of Engineers Sept. 1975
- Comprehensive Sewerage Study - Leonard Wegman & Co. Buffalo Sewer Authority December 1973
- The Challenge and Opportunity of Water Quality Management National Assoc. Reg. Councils Aug. 1974
- River on the Mend: Robert A. Sweeney, Limnos Vol 5, No. 2
- Summarized Review - 208 Water Quality Erie Niagara County Regional Planning Board Sept. 1976
- Overview of Great Lakes Water Quality, Eugene F. Seebald, New York Water Pollution Control Assoc. Spring 1976
- N.Y. State Dept. of Environmental Conservation, Water Quality Data Review Project, NSF (1974)
- Buffalo Sewer Authority, Annual Report 1974-1975.

Interviews:

- John V. Daleo: Water Quality Section, Dept. of Environmental Quality.
- William Katna: Public Water Supply Section, Department of Environmental Quality, County of Erie
- Thomas Maloney, Corp of Engineers, U.S. Army
- Raymond Marciniak, Director, Water Department, City of Buffalo
- Robert O'Connor, Engineer, Water Department City of Buffalo
- Robert A. Sweeney, PhD, Director, Great Lakes Laboratory State University College at Buffalo
- Dan Tatterbaum, Engineer, Buffalo Sewer Authority

April, 1977

DM/cr

COASTAL ZONE RESOURCE TYPES

The declaration of policy of the Coastal Zone Management Act of 1972, Section 303, states:

> "to encourage and assist the states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone giving full consideration to ecological, cultural, historic and aesthetic values as well as to needs for economic development."

The Erie and Niagara Counties Regional Planning Board has identified coastal zone resource types. These were expanded upon by the City of Buffalo Coastal Zone Management Program to include resource types compatible with an urban area and the intent of the legislation which encourages "ecological, cultural, historic and aesthetic values as well as to needs for economic development.

ENCRPB RESOURCE TYPES

- forest lands
- wetlands and adjacent area (100 foot buffer area)
- flood plains
- park lands
- historic/archeological sites
- agricultural districts
- unusual geologic formulation
- areas subject to severe coastal erosion

- aquifer recharge areas
- beaches/dunes
- fish/wildlife habitat
- mineral, petroleum and natural gas production areas and potential production areas
- streams and adjacent area (100 feet from stream bank)
- Lakes Erie, Ontario; Niagara River

CITY OF BUFFALO ADDITIONS:

- Commercial
  - retail trade - apparel and accessories
  - retail trade - furniture, home furnishings and equipment
  - retail trade - eating and drinking
  - retail trade - food
- Services
  - professional services
  - educational services
- Cultural, entertainment and recreational
  - cultural activities and nature exhibitions
  - public assembly
  - amusements
  - recreational activities
  - parks
- Resource Production and Extraction
  - fishing activities and related services
  - mining activities and related services

DONNELLEY'S PIER AND NORTH END LIGHT BREAKWATER

I. BOUNDARY

North Breakwater

II. CRITERIA FOR DESIGNATION AS RESOURCE AREA

Essential habitat for living resources

III. EXISTING CONDITIONS

Two of very few gull and tern colonies in Western New York. The northend light breakwater had 65 common tern rests and one Herring Gull rest in 1975. The concrete surfaces of this and the north breakwater have deteriorated so that crevices, cracks and various size depressions provide sites for tern rests. Common terns have been decreasing, ring-billed gulls displacing them, and Herring Gulls starting to displace the latter over the past few decades. Significant gravel and sand, fish habitat around island.

IV. PROPOSALS

Create new offshore island with landfill

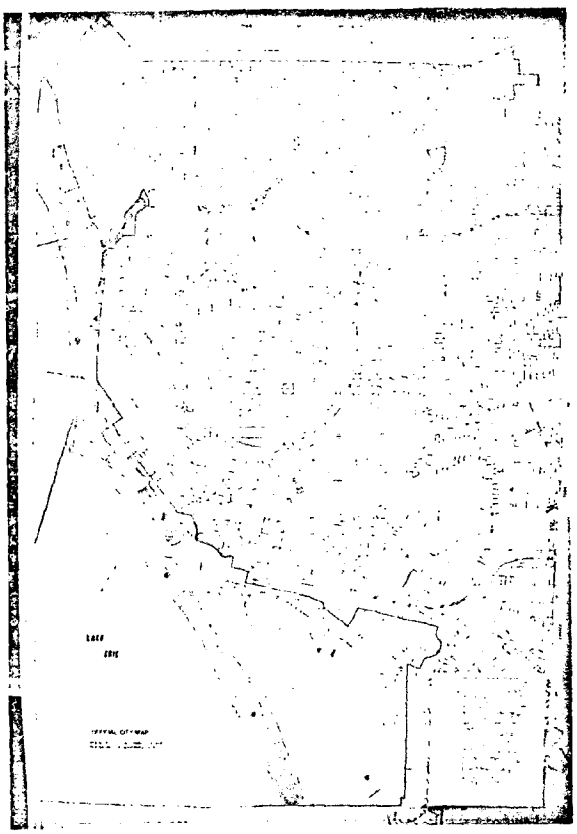
V. RECOMMENDATIONS

Restrict any alterations to wildlife habitat

Prevent distruction of fish habitat

TASK 7.3
ATTACHMENT H

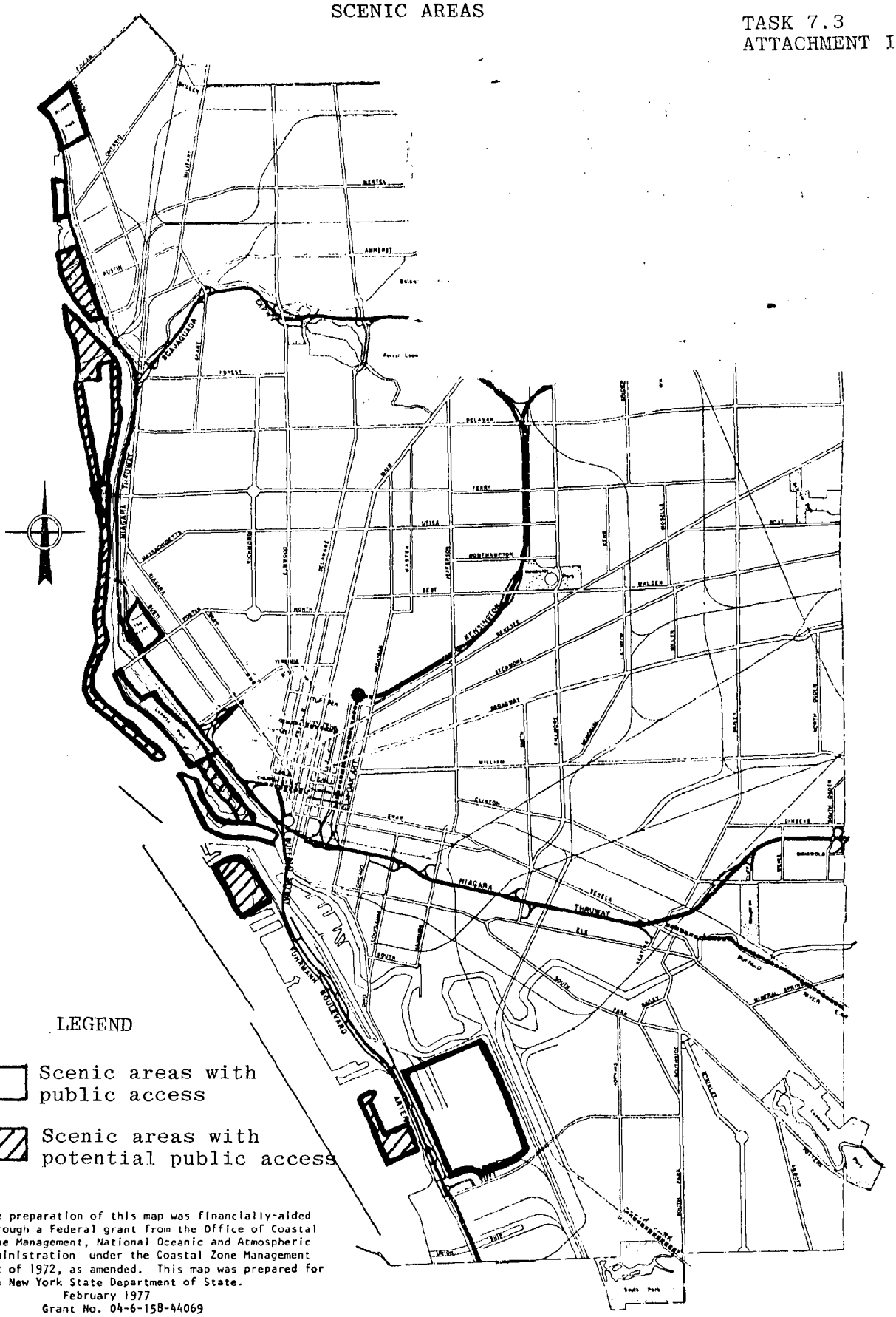
COASTAL ZONE BOUNDARY



CITY OF BUFFALO COASTAL ZONE MANAGEMENT

SCENIC AREAS

TASK 7.3
ATTACHMENT I



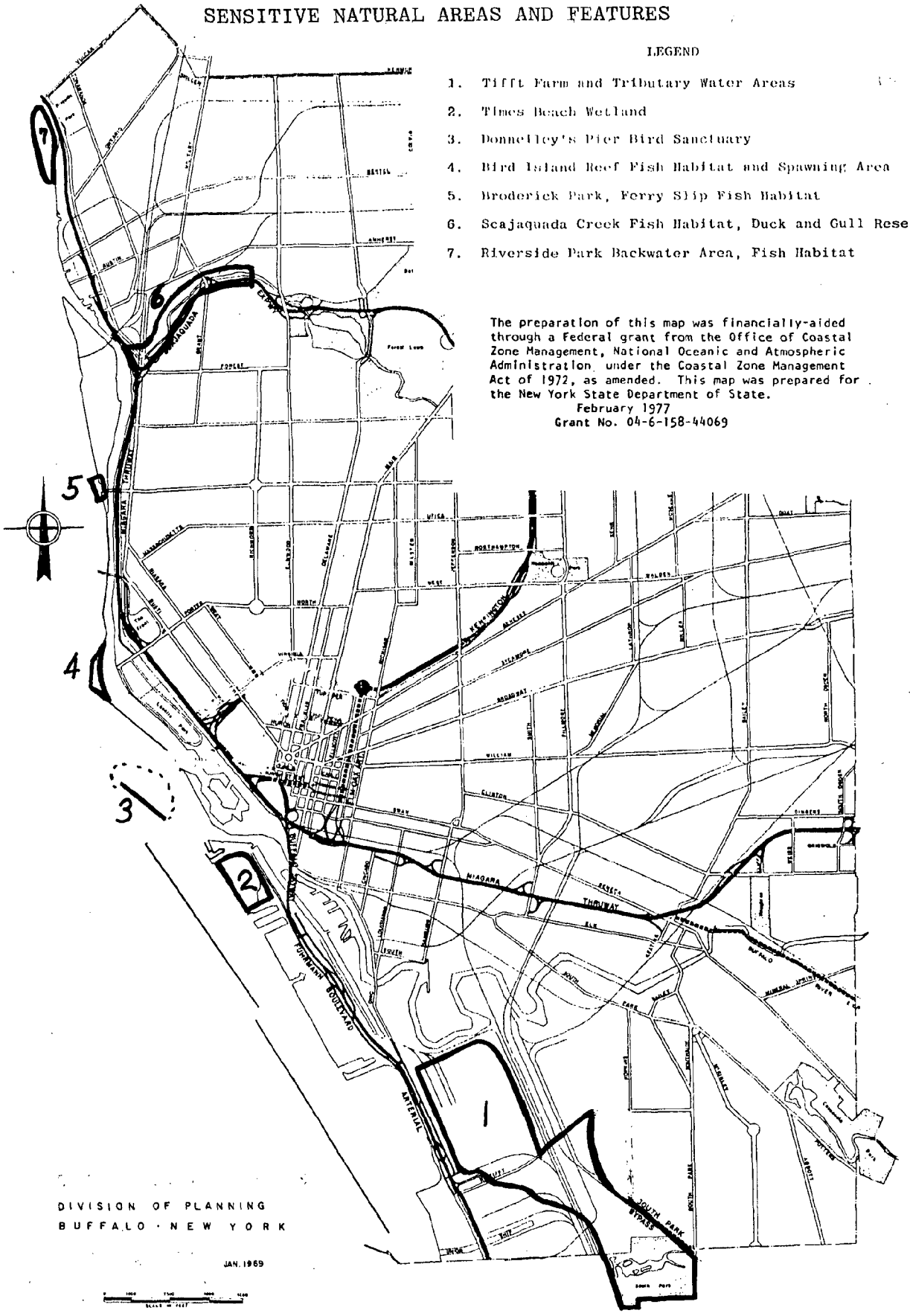
The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.
February 1977
Grant No. 04-6-158-44069

prepared by: DIVISION OF PLANNING

CITY OF BUFFALO COASTAL ZONE MANAGEMENT

TASK 7.3
ATTACHMENT J

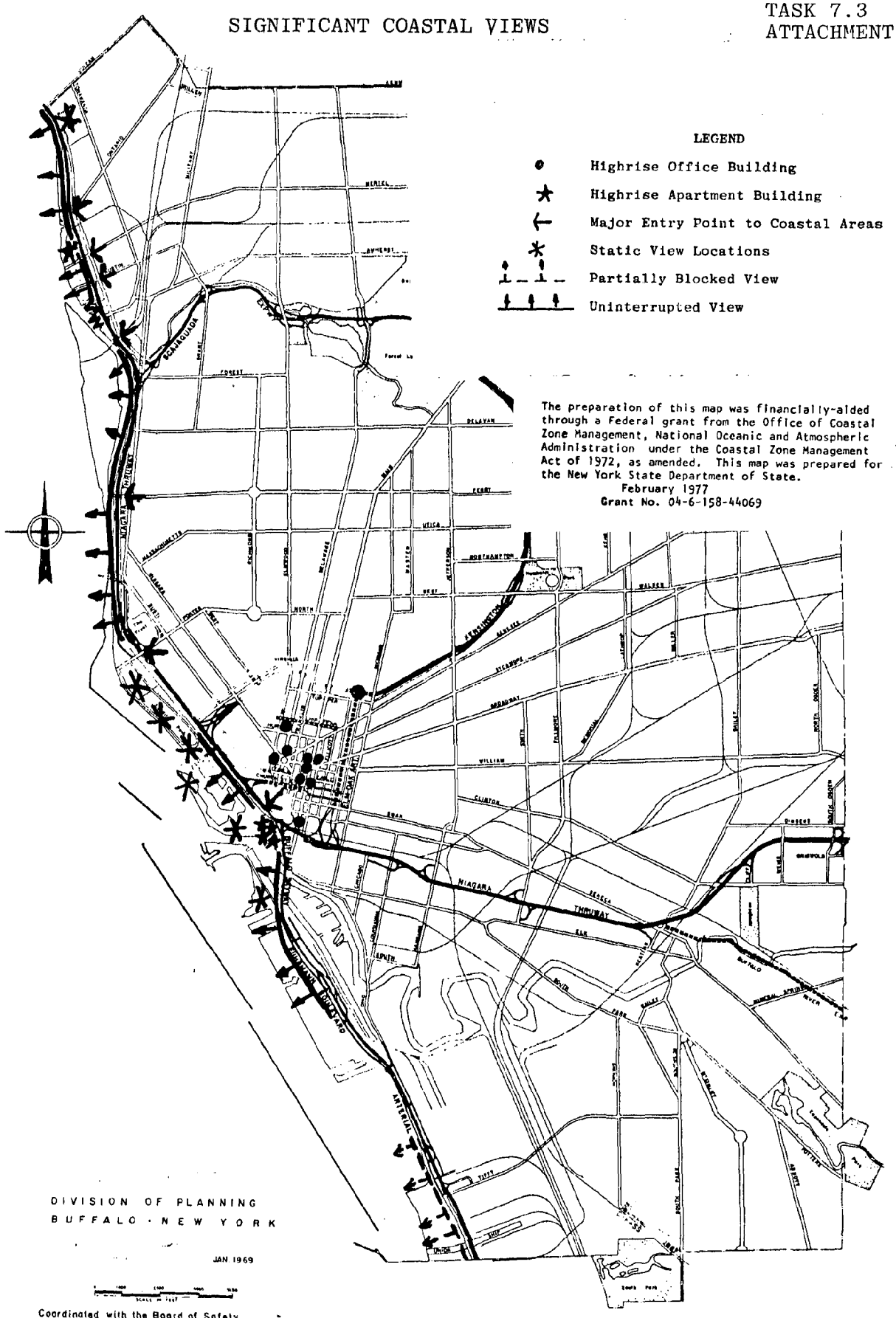
SENSITIVE NATURAL AREAS AND FEATURES



CITY OF BUFFALO COASTAL ZONE MANAGEMENT

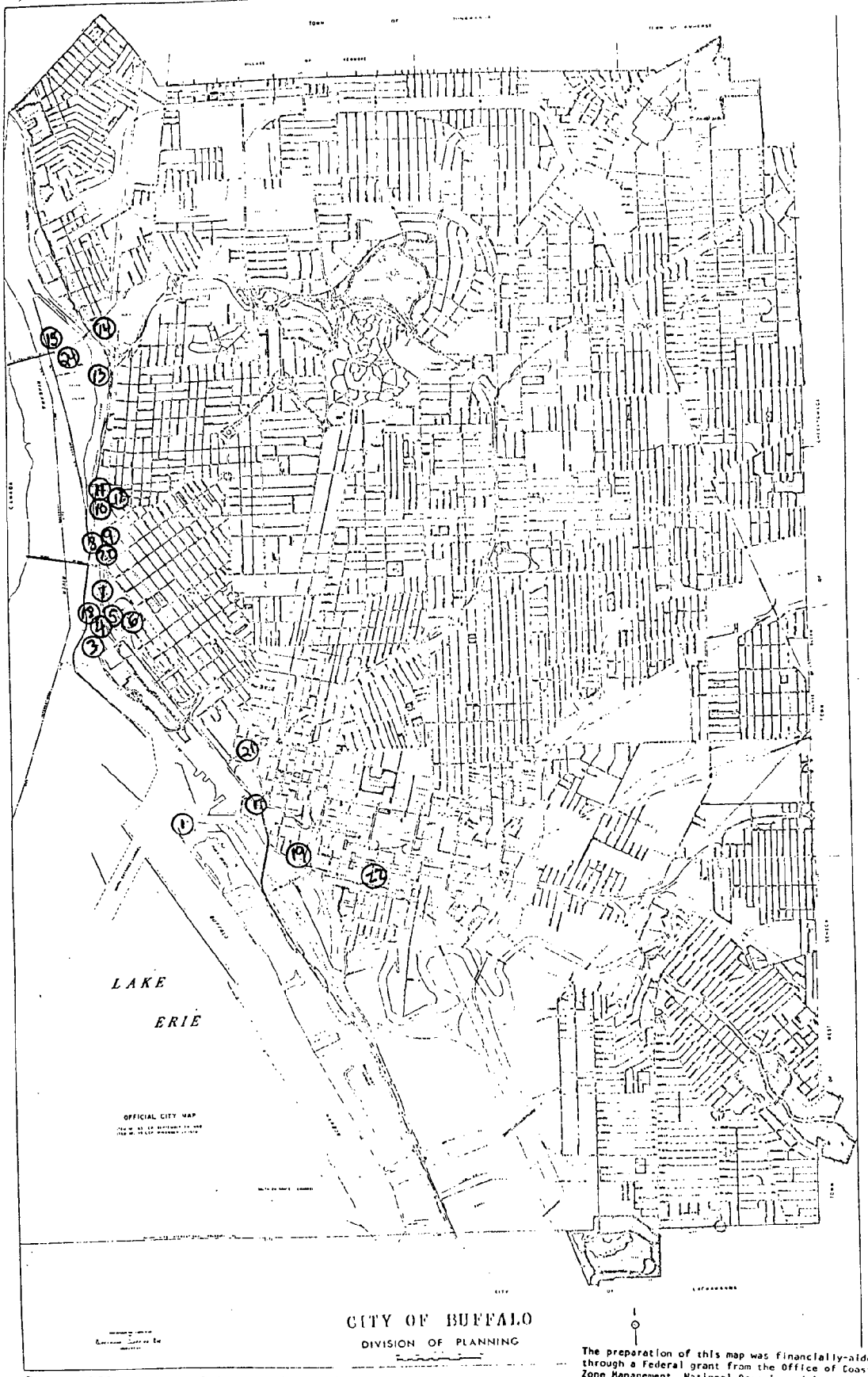
SIGNIFICANT COASTAL VIEWS

TASK 7.3
ATTACHMENT K



The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.
February 1977
Grant No. 04-6-158-44069

prepared by: DIVISION OF PLANNING



Sites of Historic and Archeological Significance

The preparation of this map was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This map was prepared for the New York State Department of State.
February 1977
Grant No. 04-6-158-44069

COASTAL ZONE MANAGEMENT PROGRAM OF BUFFALO

SITES OF HISTORIC AND ARCHEOLOGICAL SIGNIFICANCE

LEGEND

1. 1833 Buffalo Lighthouse - Chinaman's Light - 1 Fuhrmann Boulevard - the third and most significant lighthouse in the development of the Buffalo Harbor

2. Birge Company - 390 Niagara Street. One of Buffalo's largest industries, The Birge Company was founded in 1834 and began its manufacture of wallpaper in 1879. Charles Burchfield, the artist, designed wallpaper for the company. One of his paintings, "Little Italy" was the view from his office window

3. Buffalo Yacht Club - Foot of Porter Avenue. Founded in 1860, the Buffalo Yacht Club is reportedly the third oldest yacht club in the United States. Near here was an early car ferry and the entrance to the Black Rock Harbor

4. O.H. Perry Monument - Northwest corner of Front Park. This monument is in honor of Oliver Hazard Perry, the victor against the British in 1813 Battle of Lake Erie

5. 100th Regiment Boulder - Front Park. This monument erected by the Buffalo Board of Trade, sponsors of the regiment, commemorates the 100th regiment, New York Volunteers, who served in the Civil War

6. Paul Busti - Northwest corner of Porter and Busti Avenues. Busti, the Phiadelphia agent for the Holland Land Company, directed Joseph Elliott, "To lay out a plan for the town (Buffalo) at the mouth of the Buffalo Creek

7. Fort Porter - Customs Station, American side. This is the site of Fort Porter, built to defend the Niagara Frontier in 1844 against possible British attacks. It was torn down in 1926 to make way for the Peace Bridge

8. Black Rock - Niagara and Busti Avenue. The black rock, a huge 200' by 300' dark limestone natural pier, part of the original harbor, extended four feet above the River at this point.

9. Fort Tompkins - (also known as Fort Adams) 1010 Niagara Street. Port Tompkins was the largest and most important fortification in Buffalo on the American shore during the War of 1812

10. General Peter B. Porter House - overlooking the Niagara River north of Ferry on Niagara Street. Built in 1816, this was the residence of General Porter, a nationally known figure, instrumental in the development of the Black Rock community.

11. Thomas Flyer Automobile - 1200 Niagara Street. The Thomas Flyer Automobile, holder of many world records, was built here from 1903 - 1911

12. Battle of Black Rock - Niagara and Tonawanda Streets. The battle in which the Americans were victorious was fought on August 3, 1814, one of the major land battles in Western New York during the War of 1812

13. Orrin Stickney House - 1207 Niagara Street. Built in 1819-1820, this is considered the oldest building in Buffalo

14. Old Navy Yard - 1700 Niagara Street. At this site, five of Commodore Perry's ships were reconditioned for his victory on Lake Erie against the British in 1813

15. International Railroad Bridge - Niagara and Bridge Streets. This bridge crossing the Niagara River was built in 1870 - 1873. It was designed by Sir Casimer S. Gzowski, a noted Polish-Canadian engineer

16. Fenian Raid - 2192 Niagara Street (Jafco Marine Restaurant). At this site, the Ferians disembarked for Canada on May 31, 1866, in the cause of independence for Ireland

17. Old Erie Canal - from Albany to Buffalo along edge of river

18. Last visible portion of the Erie Canal in Buffalo. Proposed as site of Erie Canal Park

19. Mutual Pillsbury (Great Northern) Grain Elevator, Ganson Street. Built 1893. Example of early steel storage bins. In use as adjunct to flour mill.

20. Col. Ward Pumping Station - the ultimate in reciprocating steam engine powered water pumps. 5 Holly pumps, space for 5 more, on standby only. Monumental building built in 1916, suggested for museum

21. Buffalo Gas Works - 1848, now used by National Fuel Gas as a service headquarters, listed on National Register for Historic Places

22. Buffalo Public School #34 - constructed 1863 with addition in 1895. 1863 section originally had open type classrooms

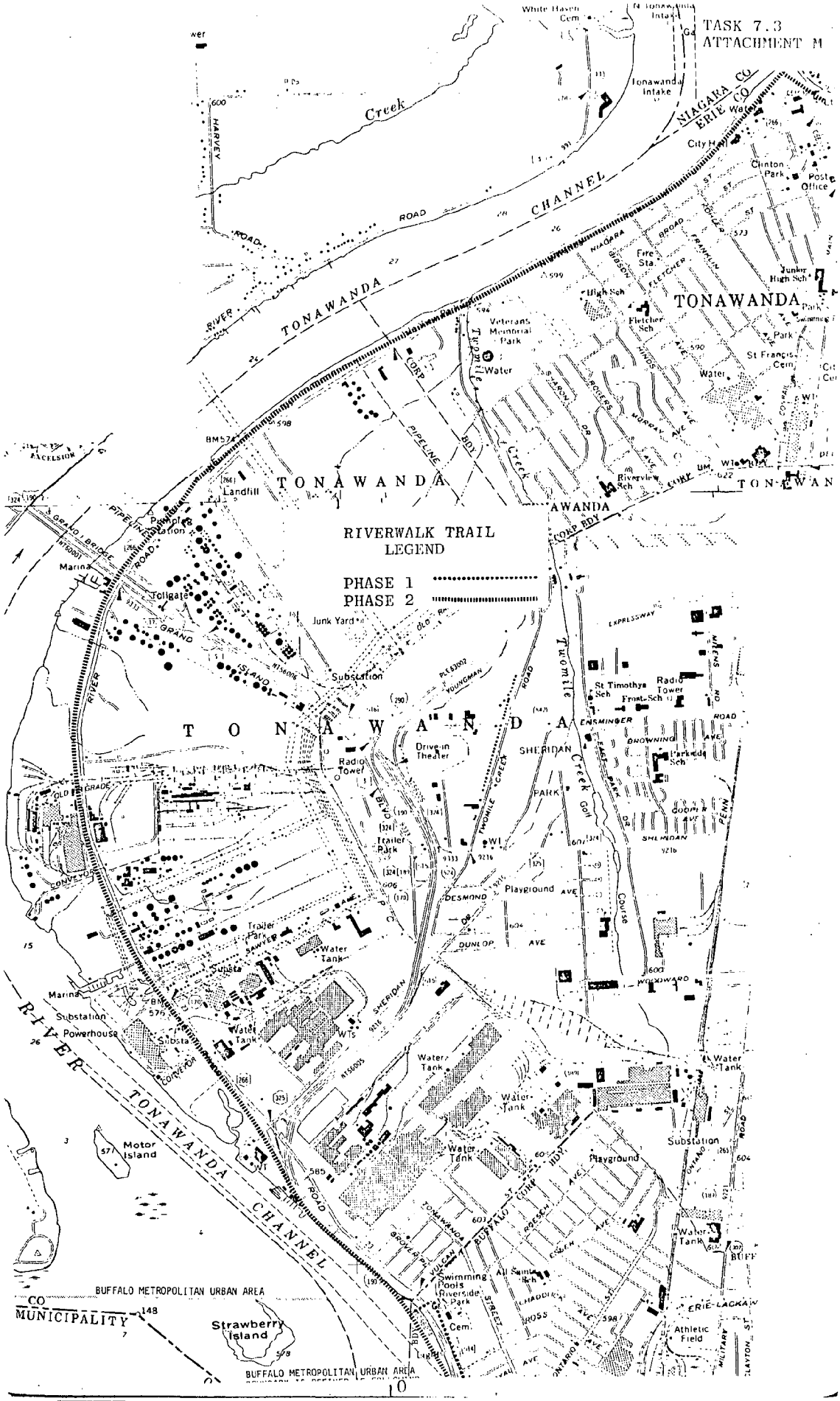
23. The Black Rock Shipyard - located near the mouth of the Scajaquada Creek. Five of Commodore Perry's ships were built here in 1815

24. The Griffon - first ship to sail the upper Great Lakes. It was outfitted at Squaw Island after being towed up the river from LaSalle, where it was constructed in 1679.

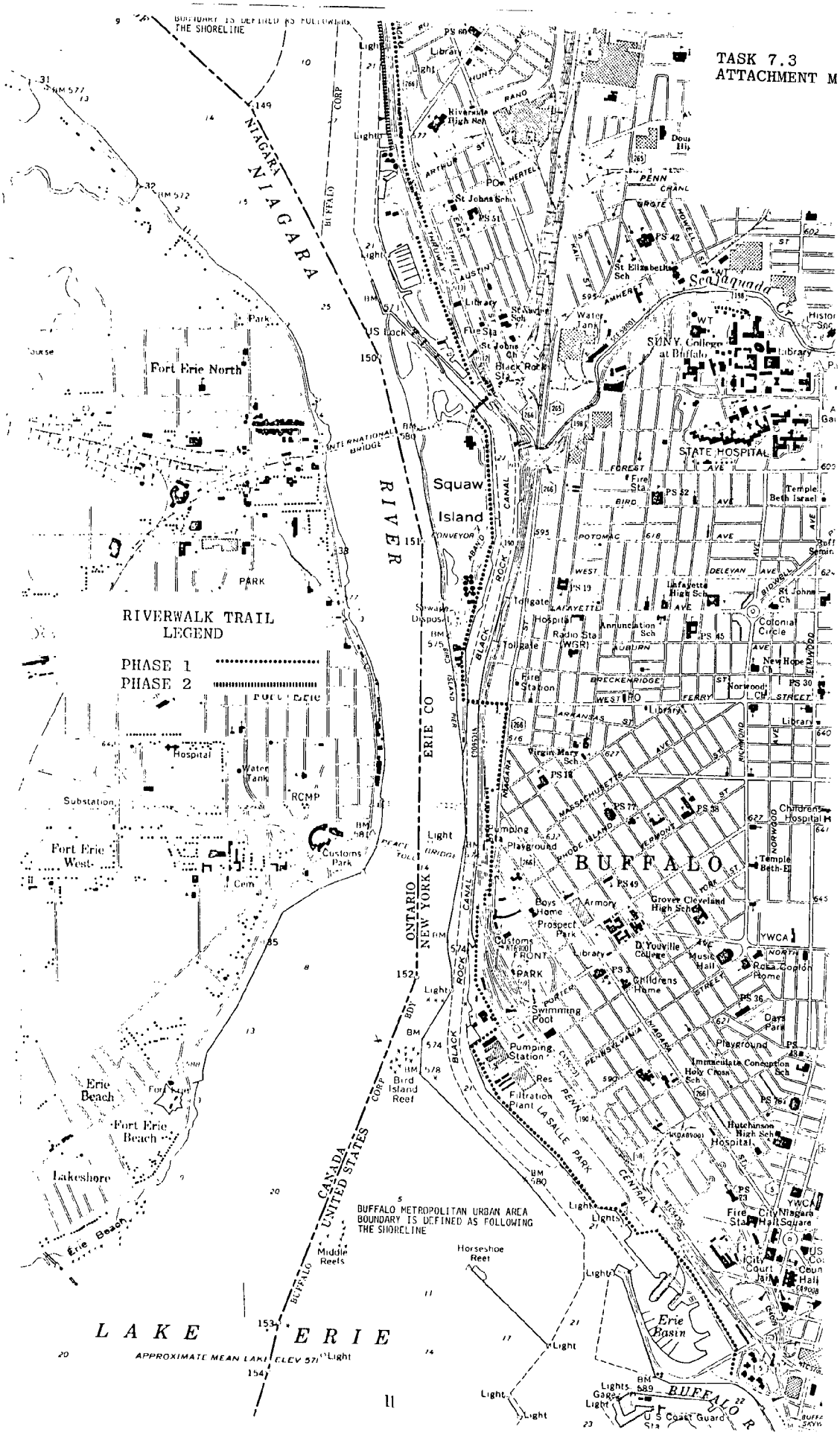
Sources:

- Buffalo and Erie County Historical Society
- Henry Baxter, Industrial Archeological Historian
- The Urban River

TASK 7.3
ATTACHMENT M

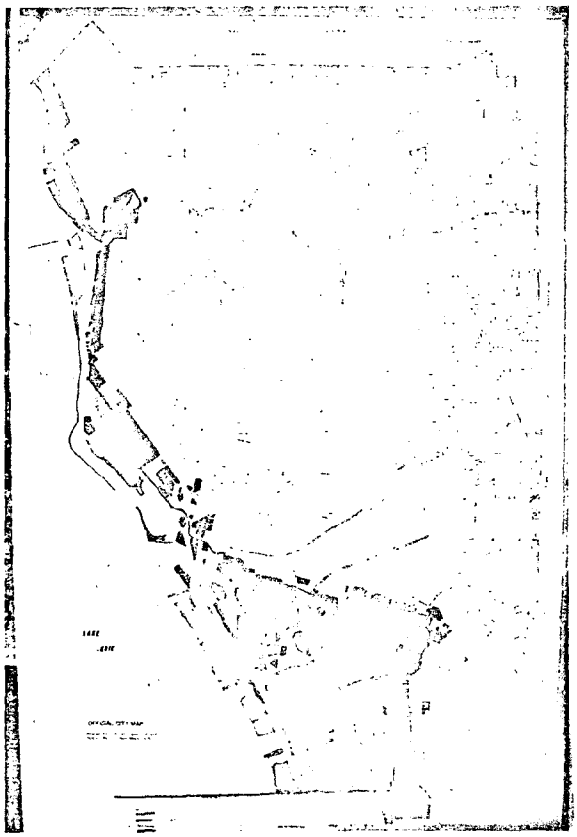


TASK 7.3
ATTACHMENT M



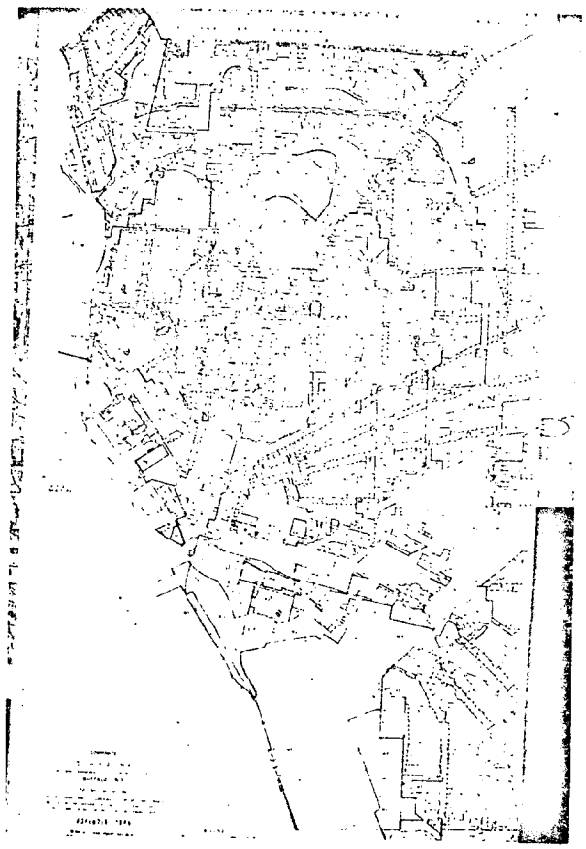
TASK 7.3
ATTACHMENT N

CURRENT LAND USE



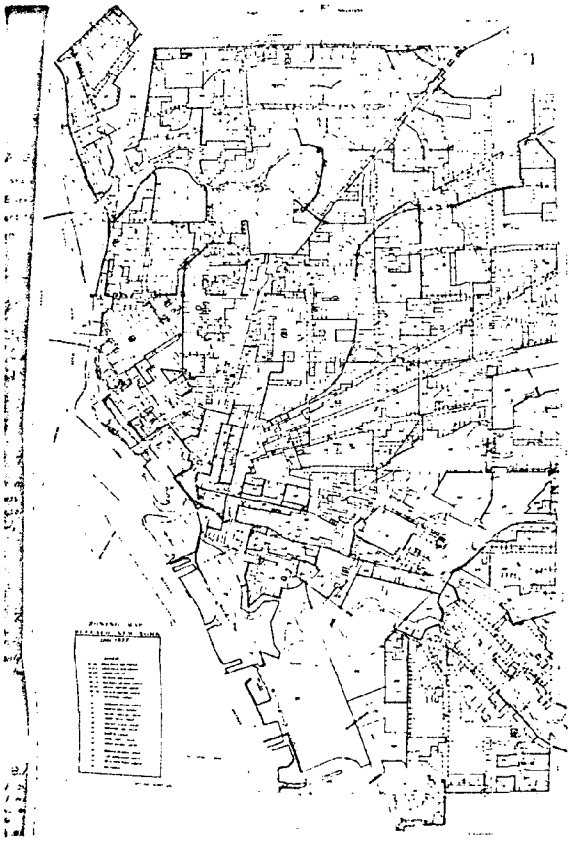
TASK 7.3
ATTACHMENT O

CURRENT ZONING



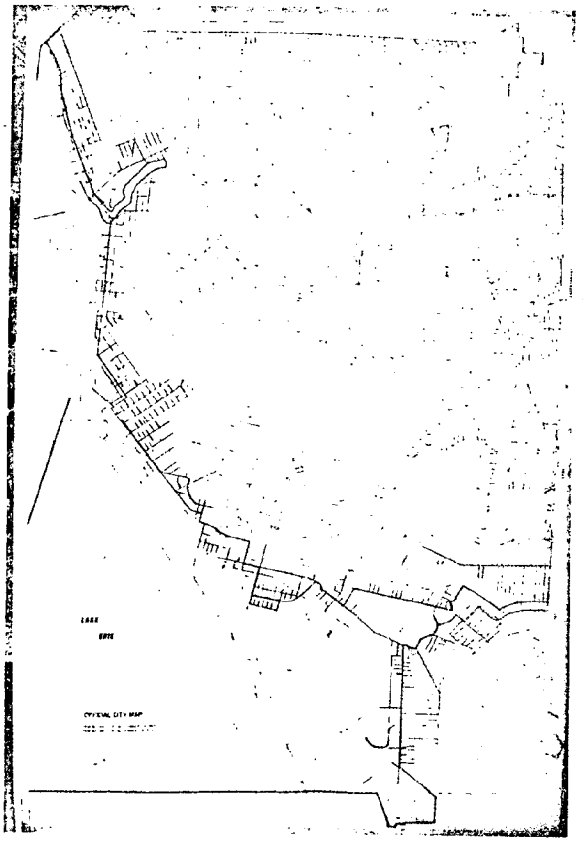
TASK 7.3
ATTACHMENT P

PROPOSED ZONING



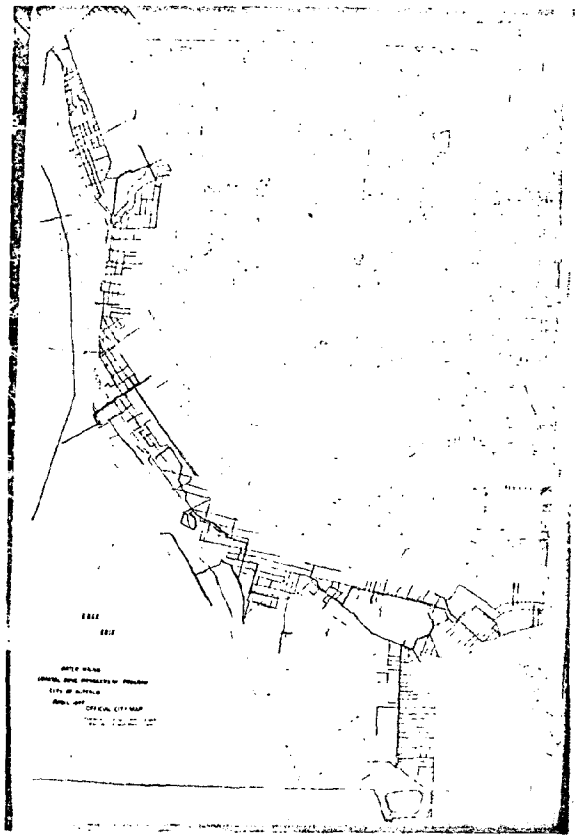
TASK 7.3
ATTACHMENT Q

Sewer Mains



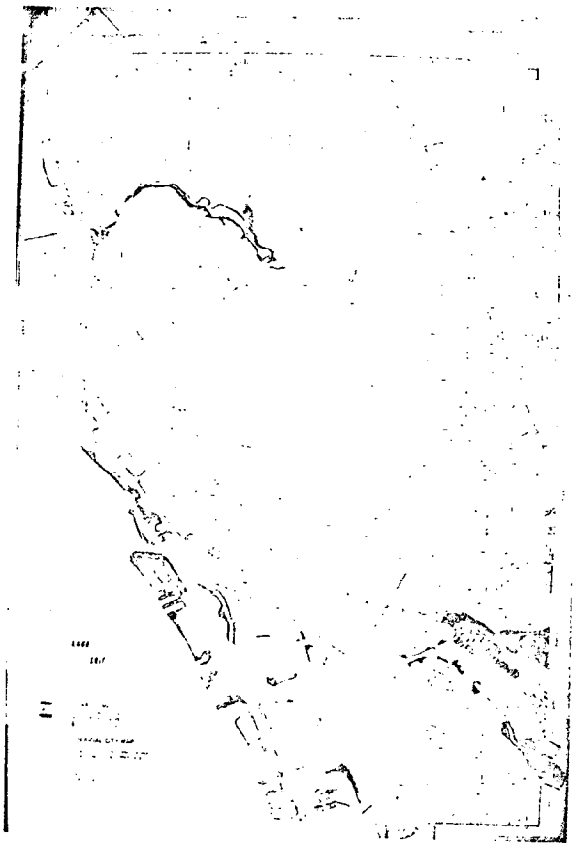
TASK 7.3
ATTACHMENT R

Water Mains



TASK 7.3
ATTACHMENT S

Flood Hazard Areas



Coastal Zone Management Program

City of Buffalo

May 1977

Task 7.3

Report on Sites for Designation
for Preservation, Restoration, and
Development

The preparation of this document was financially-aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This document was prepared for the New York State Department of State.

Grant No. 04-6-158-44069

The Coastal Zone Management Program involves the designation for preservation, restoration and Development of areas valued for their conservation, recreational, ecological or aesthetic characteristics. In assigning priorities to areas, assessment was made of the importance of the resource; and the feasibility of preserving/restoring/or developing the resource. Priorities are listed in decending order.

Priorities for Preservation

1. Upper Niagara River
2. Times Beach
3. Tifft Farm and Tributary Area
4. North End of Squaw Island

Priorities for Restoration

1. Black Rock Harbor
2. Buffalo River
3. Scajaquada Creek

Priorities for Development

1. Waterfront Urban Renewal Area
2. Outer Harbor
3. Inner Harbor

Each of these areas, its merits and problems, is discussed separately in the following pages.

North End of Squaw Island

I. Boundary: North end of island south to Buffalo Authority property line.

II. Criteria for Designation: The area is ideally located for use as a recreation facility. It is situated between Black Rock Harbor and the Niagara River, and provides views of the Canadian and American shorelines and the river itself. The site is in proximity to many of the City's congested, old neighborhoods.

III. Existing Conditions: The site is presently being used for the dumping of incinerator ash from the Bird Island plant. It is anticipated that this use will terminate in 1980.

IV. Proposals: Both the Buffalo Master Plan and The Urban River have proposed the development of recreation facilities on this site. The proposed Riverwalk will provide pedestrian access from the mainland. However, proposals for an All American canal would require significant widening of the Black Rock Channel. Also, the proposals for regulation of the Great Lakes water level have suggested the use of this parcel for a diversion channel.

V. Recommendations: It is recommended that this site be developed for recreational use and that its open space characteristics be preserved thereafter.

Black Rock Harbor

I. **Boundary:** Black Rock locks on the north; Buffalo Shoreline on the east; Squaw Island, Bird Island Pier, and western edge of dredged Black Rock entrance channel on the west; line extending west from Light #2 in Erie Basin Marina on the south.

II. **Criteria for Designation:** The harbor has littoral areas which can serve as fish spawning habitats if water quality is improved.

III. **Existing Conditions:** Black Rock Harbor is heavily polluted. It is anticipated that the various point sources along the shore will be eliminated in conformance with new federal legislation.

IV. **Proposals:** There have been proposals to dredge existing littoral areas to provide small boat moorings.

If the proposed All-American canal were to achieve a favorable cost-benefit ratio, the harbor would be dredged and widened, so that no natural areas would remain.

V. **Recommendations:** It is recommended that efforts be made to restore the natural aspects of the Harbor through the prevention of any unnecessary dredging and the improvement of water quality.

Scajaquada Creek

I. Boundary: A line 200 feet from the bank of the creek or 100 feet from the expressway right of way, whichever is greater, extending from the Black Rock Canal to the dam at Howell Street.

II. Criteria for Designation: The site attracts ducks and gulls. It could also function as a fish spawning habitat if water quality were improved. The site also offers the potential of being developed as a linear park.

III. Existing Conditions: The poor water quality of the creek prevents it from serving as a fish spawning area at the present time. In periods of low flow, this is due to the influx of polluted water from Black Harbor. At other times, it is due to sewer overflows in the Town of Cheektowaga, which enter creek upstream.

IV. Proposals: The Urban River proposes that a trailway be developed along the creek to connect Delaware Park with the proposed Riverwalk. It also suggests the development of a small boat harbor near the mouth of the creek. Additionally, that study also proposes that a four acre park facility be located below the entrance-exit ramps of the Scajaquada Expressway at its junction

with the Niagara Section of the Thruway. Proposals have been made to construct a Delaware Park Bypass, which would channel sewer overflows from the Town of Cheektowaga to the Buffalo Sewer Authority.

V. Recommendations:

It is recommended that Scajaquada Creek be restored so that it can become a viable fish spawning area. The banks should be developed as a trailway/linear park and preserved as open space.

Niagara River

I. Boundary: International boundary on the west; end of Squaw Island on the north; Squaw Island and Bird Island Pier on the east; line extending from the foot of Porter Avenue to the international boundary on the south.

II. Criteria for Designation: Despite the less-than-optimal water quality of this section of the river, it serves as a habitat for various species of fish and waterfowl. More importantly, it is one of few fish spawning areas in the locale.

III. Existing Conditions: Although the Buffalo River is the greatest contributor of pollution to the river, it is still a viable natural resource. It is expected that the water quality of the Buffalo River and Lake Erie will improve, thus increasing the viability of this resource. Even now the river and its shoreline offer the City unique natural beauty.

IV. Proposals: The construction of two diversion structures has been proposed to regulate the water level of Lake Erie. Construction of an All-American canal has been proposed but does not enjoy a favorable cost-benefit ratio at this time.

V. Recommendations: The preservations of the Niagara River in its natural state as it now stands is recommended.

Waterfront Urban Renewal Area

I. Boundary: Urban Renewal Tract A as shown on City of Buffalo map, April, 1976.

II. Criteria for Designation: This tract offers a beautiful view of Lake Erie, the Niagara River, and the Canadian Shoreline.

III. Existing Conditions: Tract A is cleaned and is a valuable resource for development. It is in close proximity to downtown and densely populated inner-city neighborhoods, and offers the potential of providing a waterfront-focus and positive image for the City.

IV. Proposals: The proposed Riverwalk will pass through this area. A use mix is proposed to accommodate water-oriented residential and commercial development. Park and recreational areas would be integrated into the plan. However, a proposal to build a theme park-shopping arcade at the north end of the Tract is under consideration.

V. Recommendations: This area should be developed with water-oriented uses which provide public access to the waterfront, and with public recreational facilities. Such development can provide a unique resource to the City and the region.

Times Beach

I. Boundary: The harbor line on the west; the U.S. Coast Guard property on the north; Fuhrmann Blvd. ROW on the east; the southern boundary of the diked disposal area, extending to Fuhrmann Blvd. on the south.

II. Criteria for Designation: This diked disposal area has created a wetland which is a unique and essential terrestrial habitat for wildlife.

III. Existing Conditions: Times Beach is in a strategic position to intercept water and land bird migrants from both north and south lake shores. The dike protects the littoral and silt flat from excessive wave and storm action and it provides a sheltered water area that is taken advantage of by waterfowl. There is also a viable fish population within the dike. The area has been deeded to the City by the U.S. Department of the Interior with the stipulation that it be used for recreation.

IV. Proposals: Three different futures have been proposed for Times Beach. Ornithologists and environmentalists would like to see it remain as a wetland. Some proponants of port expansion have suggested that it be

used as a coal storage site. In 1963 the City of Buffalo submitted an active recreation plan for the area to the U.S. Department of the interior.

V. Recommendations:

Because of the unique character of Times Beach, it is recommended that it be preserved and maintained as a wildlife habitat. This is compatible with the U.S. Department of the Interior's actions in endorsing urban natural areas as recreational places.

Outer Harbor

I. Boundary: Southern boundary of Black Rock Canal on the north; breakwaters of the Outer Harbor on the west; the City line on the south; eastern ROWs of Fuhrmann Blvd. and Pennsylvannia Railroad on the east.

II. Criteria for Designation: The Outer Harbor offers a significant view of Lake Erie. It is also Buffalo's only port area which can accomodate the newer lake vessels with their deeper draft.

III. Existing Conditions: The Port of Buffalo is equipped to handle bulk shipments. A foreign trade zone has been established and there is some water-related industry in the area. A twenty acre active recreation area is being developed on the waterfront adjacent to Tifft Farm. At this point in time, the Outer Harbor is underutilized.

IV. Proposals: Proposals to realign the Buffalo River have appeared most recently in The Buffalo River/Buffalo Creek Recreation and Open Space Preservation Plan. The location is also under consideration for development as a trans-shipment site for western coal. Expansion of the foreign trade zone has also been suggested.

Outer Harbor (Cont'd)

V. Recommendations:

The Outer Harbor should be developed solely for water-related uses. Post expansion needs special consideration. Where feasible, recreational development should be encouraged. If the Buffalo River is realigned, the northern portion of this area could be made available for residential development.

Inner Harbor

I. Boundary: Fuhrmann Blvd. on the west; the Esplanade, Buffalo Skyway, Thruway, Chicago St., South Park Ave., Erie Lackawanna Railroad ROW, and Buffalo Creek Railroad ROW on the north; Bailey Ave., Hopkins St., P.R.B. Railroad ROW; City Linear the south.

II. Criteria for Designation: The Inner Harbor served as Buffalo's port during its heyday. It is still of major importance to the area's economy.

III. Existing Conditions: Some heavy industry is still active along the Buffalo River, but much of the area is vacant. A maze of underutilized railroad tracks runs through the Inner Harbor. A lack of sewers, pollution of the river, use of waterfront locations by non-water related industry and the existence of flood plains characterize the locale.

IV. Proposals: The Buffalo River/Buffalo Creek Recreation And Open Space Preservation Plan proposed realignment of the river, a move that would make the Inner Harbor the focus of port activity once again. The same study proposed that the City adopt a policy of land banking as land becomes vacant along the river, so that redevelopment of the area would be more feasible. It also supported

the development of recreation facilities to support the South Buffalo community. The Buffalo Master Plan supported commercial, industrial, and warehousing development for the area.

V. Recommendations:

This area is in intense need of re-development. If it is to become a viable port facility, realignment of the Buffalo River must become a reality. Since a task of such proportions could only be considered at some point in the future, other measures must deal with the problems of the Inner Harbor in the short and mid-range time span. The City should pursue a policy of land banking along the Buffalo River. Such acquisitions could serve as open space and provide public access to the river until development transpires. Industry of a non-water-oriented nature should be encouraged to locate in vacant areas not adjacent to the river. Water-related industry which can operate effectively under the confines of the present port facilities within the Inner Harbor should be encouraged.

Excess railroad trackage should be eliminated, so that those areas can be developed as linear open space corridors.

Buffalo River

I. Boundary: Bailey Avenue on the west; Elk Street, Seneca Street, Archer Ave., the Penn Central Railroad ROW, Houghton Park, and a line 200 feet north of the river's edge on the north; city line on the east; a line 200 feet south of the river's edge, the property line between Avondale Pl. and Leamington Pl., Seneca St., and Pomeroy St. on the South.

II. Criteria for Designation: Most of this area is situated in a flood plain and therefore, is not suitable for many forms of development. Some scenic areas still exist along this portion of the river. Residential development exists on either side of the river east of Seneca St., so it could serve as open space.

III. Existing Conditions: Water quality is poor in this portion of the river. Much of the area is neglected or ignored, and some spots are used for dumping.

IV. Proposals: The Buffalo River/Buffalo Creek Recreation And Open Space Preservation Plan suggested that this area be developed as park and recreation facilities.

Buffalo River (Cont'd)

V. Recommendations:

Because this area is unsuitable for development, and because it is adjacent to residential neighborhoods, it should be restored. As water quality in the river improves, it will become more suitable for recreational use.

Tifft Farm and Tributary Area

I. Boundary: Lehigh Valley Railroad ROW on the north; Penn Central Railroad ROW and a line 100 feet east of the stream leading from South Park to Tifft Farm, Tifft St., and Fuhrmann Blvd. on the west.

II. Criteria for Designation: Tifft Farm is an essential habitat for wildlife. Ground and surface water flow from South Park to Tifft Farm.

III. Existing Conditions: Tifft Farm is an urban natural area which is teeming with wildlife. At present, the areas along the creek between it and South Park are undeveloped.

IV. Proposals: Tifft Farm is generally recognized as worthy of preservation. Its tributary areas have been proposed for industrial development. More recently, a 100 foot easement has been proposed along either side of the creek which supplies Tifft Farm with water.

V. Recommendations: Because Tifft Farm is a unique resource in this area, fish should be preserved as a wildlife habitat. An easement along the creek between Tifft Farm and South Park would help to alleviate any possible adverse effects of development of the tributary areas.